

Aviation News

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Heads Industry Production Group: Victor Emanuel, president of the Aviation Corporation, was named this week as head of the National Aircraft War Production Council at the joint sessions of the East and West Coast Councils in Los Angeles, attended by top executives of the aircraft manufacturing industry. Emanuel, who also became head of the East Coast Council, succeeds P. G. Johnson, of Boeing, as head of the national organization.

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United Front on Post-War Problems

Revitalized ACCA expected to get full powers at Los Angeles meeting this week to deal with aviation developments....Page 7

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'Constellation' Breaks U. S. Record

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Earnings Lag Behind Business Gain

Incomes uniformly good, with amount of profiteering negligible, examination of aircraft company accounts shows.....Page 46

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House Votes Navy 24,230 Planes

New aircraft provided in appropriation for 1945 fiscal year to bring quota to authorized strength of 37,735 "useful" planes. Page 33

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P & W's New Plant in Production

United Aircraft Division expected to reach output on 2,100 hp. motors of 3,000,000 hp. a month.....Page 30

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Air Strategy's Vital Role in India

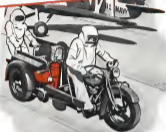
Drive for opening of Ledo road and ultimate junction with Burma highway would reopen supply line to China.....Page 19

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Post-War No Problem to "Ercoupe"

Company's expansion in subcontracting work not so great as to make plant topheavy for shift to peacetime production. Page 15

Motor-bike built for two



Here's an excellent answer to the need of airports for highly-mobile fire-extinguishing equipment. Manned by asbestos-clad firemen and loaded with Kidde carbon dioxide extinguishers, this motorcycle "crash truck" can rush right up to crash fires and other blazes and snuff them out quickly under a blanket of carbon dioxide gas.

Kidde extinguishers are being

mounted in many ingenious ways to make their fast fire-killing effect fully available to air fields. They're carried on large emergency trucks, two-wheeled trailers, jeeps—even on "scouters."

If you have a fire protection problem—in the air or on the ground—the wide experience of Walter Kidde & Company in this field will be helpful in finding the best solution. Just drop us a line!



WALTER KIDDE & COMPANY, INC., 450 MAIN STREET, BELLEVILLE, N. J.

THE AVIATION NEWS

Washington Observer

WOMEN WORKERS—Many reasons have been advanced by women aircraft workers who have decided to leave their jobs, but one of the strongest yet has been advanced by a number of Pratt & Whitney's visit new plant at Kansas City. They told their exit interview that they were all right as long as they were moving about the machinery at the company's school but that, after they actually went to work, the plant itself was so large that it frightened them. Incidentally, only Chrysler Corp.'s Dodge plant at Chicago is larger.

1939-C AT CHEVROLET—While the Pratt & Whitney plant at Kansas City is a Navy project and will be operated under sponsorship of the Navy, it is interesting to note that the Army has expressed interest in the facilities and in the ultimate use to which the Double Wasp engines will be put. In this connection, it was disclosed that Chevrolet is taking up to produce this engine and that Chevrolet is an Army plant.

ADVENT OF THE "BARRACUDA"—British's new "Barracuda," made by the Fairey Aviation Co., producer of the "Seafish," the "Fulmar" and the "Albacore," is said by the British Information Services to be "the most sophisticated and versatile machine ever to take off from a carrier's deck." These are strong words, but the "Barracuda" can operate by day or night and, through primarily a torpedo-plane, it can carry bombs or mines, is said to be a first-class reconnaissance plane and can be shrouded. It is a high-wing monoplane powered by a "Hals-Boyer Merlin engine. The "Barracuda" is reported to lead itself well to group production. Designs for the plane were produced in 1933, the plane was then delayed for modification until 1942. The aviation industry is closely watching its performance.

CONSTELLATION FLIGHT—The record-breaking flight of TWA's Lockheed Constellation was more than an aviation event. The wide-spread interest shown in non-aviation circles in Washington and elsewhere is evidence of the attention an aviation enterprise can have in the midst of the spectacular performance of our military men and planes. Here was tangible evidence of the post-war airplanes that people have heard and read about and it is significant that the Constellation's flight won the top topic of conversation that day, trading the war news out of the minds of an aviation-inter-

ested people. It b augurs well for the future of the industry.

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THE "LODESTAR" TOO—Somewhat overlooked in the general acclaim for the "Constellation"—but just as important in the whole air transport picture, was the record-breaking flight of National Airlines' Lockheed "Lodestar" from New Orleans to Jacksonville—important because this flight emphasized that different types of airplanes are needed for different routes and runs and that the aircraft manufacturing industry and the airlines foresee this and are getting ready.

DEMAND FOR NAVY ORDINANCE—Although Army ordnance requirements are already declining, with various cutbacks given wide publicity, including tanks, there is no corresponding decrease in Navy ordnance. In fact, the Navy up to a few weeks ago had not even begun a plateau of such production, and probably won't for months. This will have an important effect on regions operating such plants for Navy contracts.

BOMBER PRODUCTION—Approval by AAF review officers for the assembly by both Boeing and Ford that they are producing a four-engine

COMPARISON OF BOMBING FORTRESS DELIVERIES AND MANPOWER



bomber each hour turns the spotlight on the nation's two plants leading in such output. It also indicates—despite the plea of government aff-



About All Else

Beechcrafters are exerting every effort to hasten the day of Victory. War Production comes before all else at Beechcraft.

Beechcraft Bomber Trainers, Beechcraft Navigation Trainers, Beechcraft Transitional Trainers, Beechcrafts for Photographic Mapping, Beechcraft Twin Engine and Single Engine Personnel Transports—dozens of Beechcrafts are working for our Armed Forces, and still there is no let-up in Beechcrafters' determination to "Kill 'em with Production" or in deliveries of the production line.

Beech Aircraft



INCORPORATED IN THE UNITED STATES OF AMERICA

Official U. S. Army Photograph



Low Wing Personnel Trainer for General and David Robinson Navigation Trainer



U. S. Army Twin Engine light aircraft for personnel training



U. S. Army Single Engine Personnel Trainer for General and David Robinson Navigation Trainer

Aircraft Industry Unites Forces To Deal With Post-War Problems

Revitalized Aeronautical Chamber scheduled to get full powers at Los Angeles meeting this week to meet political and economic developments affecting manufacturers.

By SCHOLER BANUS

The United States aircraft manufacturing industry is expected to announce in Los Angeles this week its solid front organization to fight for post-war survival.

Principals of all major aircraft companies throughout the nation gathered at Los Angeles' Ambassador Hotel, will give the revitalized Aeronautical Chamber of Commerce full powers in the direct agent of the United industry, to meet political and economic problems that must be solved to assure the industry's post-war existence and prosperity.

Emergency Needed—The Chamber's Board of Governors, 18 of the industry's top corporate executives, may announce the name of the man who will spearhead the

program as active director of the Chamber's activities. In this connection the name of George Bowers, manager of the Aeronautics Council for War Production in Detroit, has been mentioned.

The Chamber, national trade association of the aircraft industry, has been on a stiff hunt for months for a man to head the activities planned under the new program. It is known that a number of prominent men have been approached on the subject and that defense efforts were made in some instances. No results of the quest for a directing head of the organization have been announced.

United Front Needed—Highly effective and well-organized in war production, through close in-

AWPC Election

Vester Emanuel, head of Aviation Corp., becomes president of the National Aircraft War Production Council at the joint meeting of the East and West Coast councils this week in Los Angeles. He succeeds P. C. Johnson, of Boeing.

National vice-president of the National Council was J. L. Kinslerberger, of North American. Board members named were Johnson, Harry Woodhead, Consolidated Vultee, L. C. Gould, Eastern Aircraft Division, General Motors, and Alfred Murcher, Republic.

Under the officer rotating plan, Emanuel also became president of the West Coast council, succeeding Gould, with Murcher as vice-president. Kinslerberger became head of the West Coast council, succeeding Johnson, with Woodhead as vice-president.

Integration of the Aircraft War Production Councils, the aircraft industry has been as highly disorganized in the rough-and-tumble of wartime Washington in pre-



THUNDERBOLTS ARRIVE AT ALASKAN BASE:

Covered with a protective coating to prevent corrosion, these P-42 Thunderbolts are being transferred to a lighter after arriving at a base in the Alaskan theater on board a United States merchant ship.

Councils was to prepare for war production demands of the immediate future.

• **Organization Needs**—Their growth

Publicly, the Aero Chamber supports the Los Angeles conference. Age 34 through 36, will be a surprise if they mature as expected, but behind scenes, industry leaders have been working for months to bring about a strong organization for mutual benefit.

Announced purpose of the joint meetings of the East and West coast Aircraft War Production

AAF gets all but 154 PT-15's, which were sold to APT and WTS operators.

More than 5,000 primary trainers have been produced in 30 months by Fairchild Aircraft Division, Fairchild Engine and Airplane Corp., at Hagerstown, Md. The 5090th ship, a PT-18, going to the Army Air Forces

The total includes 154 PT-19s, commercially designated as the M-52, which were sold to CPT and WTB operators for secondary flight training during 1940. The rest all went to the Army Air Forces, with a few to some United Nations under lend-lease. The figure also includes a number of PT-23's and PT-24's, both of which were modifications of the original PT-18.

► **Subcontractors** — Fairchild-designed PT-33's and PT-19's also were produced by Aeroma, Newark and St. Louis Aircraft Corp and Fleet Aircraft, Ltd., in Canada, produced a number of PT-23's and PT-26's.

A new model of the Navy's Wildcat that reverses the trend toward larger and heavier fighters was rolled around the skies near the Linden (N. J.) plant of Eastern Aircraft Division of General Motors last week.

It was the first public showing of the FM-2—a revised counterpart of the Grumman F4F—powered with a hitherto unannounced Wright engine with a number of new features, including forged cylinder heads that help give a considerable increase in horsepower with a reduction in weight.

The new model, refreshingly enough, is not offered as the fastest fighter, the best shipboard fighter or the most heavily armed fighter. It is just described as a "wider" Wildcat and an excellent ship for the purpose for which it is built.

More Power and Speed.—It is lighter than the FM-1 and all its revisions add up to more speed, more maneuverability, better rate of climb, shorter takeoff distance and a lower landing speed.

Rear Admiral D. C. Ramsey, chief of the Bureau of Aeronautics, Navy Department, described the ship as "the best light fighter we have."

"It is already operating from several of our carriers. Pilots are reported to be highly enthusiastic about this plane, especially its rate of climb, high sea level speed and great maneuverability," the admiral said.

► In Volume Production—The ship is now rolling in volume production from the London assembly lines, built from parts made there and at other plants of the Eastern Aircraft Division. Part of the production is going to the British, who are using Wildcats aboard their carriers.

L. C. Good, DM vice-president and general manager of Eastern in a speech following the demonstration, revealed that he had been told by the British that the Wildcat—2,500 of which have been produced at Linden—took part in the raid on the battleship *Typhoon*, providing cover and escort and strafing ship and shore anti-aircraft installations.

State Dept. believed desirous of allaying doubts expressed in London and Washington about success of discussions.

The State Department is preparing to disclose some details of the recent Anglo-American post-war international aviation discussions in London. Adolphe Berle, Jr., Assistant Secretary of State who headed the American delegation, may hold one of his "background" press conferences for the purpose.

The department presumably is anxious to allay some of the doubts expressed in both London and Washington about the accuracy of the documents, and accordingly will seek the best means to explain the "exploratory" nature of the talks and stress that there was sufficient agreement to warrant a full-dress international parley at a later date.

Informality of Talks Stressed.—In diplomatic relations, such agreement is emphasized, although in aviation circles it is hardly a surprise to learn that Britain and America, and other nations, have enough in common to warrant such a conference.

Prime Minister Winston Churchill endeavored to set the matter in its proper perspective last week when he told Congress that Berlin and Lord Beaverbrook had made such progress that international discussions now appeared feasible. He emphasized the "informal" character of the London talks, said both countries had made concessions and withheld further comment on the grounds that it would "be premature."

► **Russian Delegation Awaited**—In Washington, meanwhile, the State Department still was awaiting approval of the Russian delegation which will discuss post-war aviation with Secretary Hull's assistant, Joseph C. Grew. *Cred. Associated Press.*

names of the Chairman L. Welch Page and Assistant Secretary of Commerce for Air, William A. M. Burden. The Russians have been expected momentarily for a week. Their embassy here has not made their names public pending their arrival.

The Chinese Embassy said the question of bilateral talks with America, presumably on the basis

of State Department proposals, had been referred to Chungking, where Far Eastern post-war aviation problems are being subjected to intensive study. China has agreed to enter talks with the United States but has not named a delegation.

■ **Multilateral Agreements** — Officials here are seeking a multilateral arrangement on post-war commercial flying, at least among the big powers, and they believe the basis for it will emerge from the series of talks now under way. They are not permitting other countries to forget, however, that this country, if necessary, can impose a considerable part of the globe without access to many of the landing points which the foreigners are using as layover devices.

These officials point out that there are Great Circle routes to



The new meeting B-17 main wing assembly line at Lockheed Aircraft is helping the plant to new industrial efficiency as Boeing at Seattle expects to concentrate on the Superfortress. The line allows suspends the wings between two overhead tracks running on rails, hand operated, with an automatic lock at each of the 25 stations. It replaced the older wing line of 20 stationary stands, with the wings moved from stand to stand by overhead cranes.

[illegible]

the most which avoid both Canada and Russia and will be feasible with post-war technical advances. They bank on agreement among the big powers, however, as to reciprocal rights along certain airways. Russia will be important in

this occasion because on the north-to-the-Great route it is directly on the path to China. But authorities point out that Russia is not so strategically situated as Great Britain and Canada from the landing right standpoint.

Export Airlines Hearing—The Senate Aviation Subcommittee tentative plans to get back into action this week, first hearing representatives of American Export Airlines. Thomas Burke, former State Department chief of international communications, is expected to get an opportunity to explain his contention that a parallel between telecommunications and aviation, from the organizational standpoint, is a fallacy.

Current aviation interests have been pointing to the proposed merger of international telecommunications companies as an indication that airlines should follow suit. Burke favors the former, but since leaving the department has been staunchly advocating "regulated competition" among the airlines in foreign operations. He also will contend that, heretofore, government negotiation must be the means of obtaining landing rights in foreign areas and that the airlines must prepare to meet the competition of foreign carriers, which he is convinced will demand reciprocal rights, by furnishing superior services.



COAST GUARD HELICOPTER "RESCUE" AT SEA!

The Coast Guard has powered with the helicopter as a rescue vehicle. Photos show a Coast Guard pilot, in an inflated rescue, lowering over a life raft, then dropping his helicopter within reach of the stricken.

Termination-Disposal-Financing Hearings Drag Along in Senate

Progress toward policy formation on post-war industrial demobilization appears painfully slow to plane manufacturers with eye to peacetime future of business.

Congress continues its discussion of the termination-disposal-financing topic, but still no agreement has been reached on:

Will S.1718 (termination) be moved forward ahead of S.1720 (over-all demobilization legislation)?

Will the May bill, now awaiting a rule in the House, be held there long enough for either S.1718 or S.1720 to come from the Senate?

What action will now be taken on the Vinson bill, which has been reported out of the House Naval Affairs Committee?

Leadership obviously rested with the Senate, where hearings were continuing on all phases of demobilization, but in those anxious to see some positive action on the reconversion subject, the progress seemed painfully slow.

Elsewhere in Washington there was little if any action that would bring encouragement to the aircraft industry. Seventeen top automobile executives—many of

whom are now making aircraft or aircraft components—gathered for a full day's session, the result of which was the announcement that they would be kept doing what they are now doing.

Nelson Sees No Early Change—Addressing the group which sat as the WPA Automobile Industry Advisory Committee, Chairman Donald M. Nelson repeated his statement that no resumption of passenger car production is yet in sight.

"Not a single one of us knows when a return to the production of automobiles will be possible," Mr. Nelson said. "It depends entirely upon military events. However, it is time for the auto industry and the government to sit down together to discuss the major problems that will be involved in return to passenger car production when the day for such a return arrives."

Wilson Sees Big Job Ahead—Charles E. Wilson, chairman of the Aircraft Production Board,

called attention of the automobile men to the production job still to be done. "We're not taking our eye off the ball," he said. "It's very obvious that for many months to come, you in the auto industry will continue to have a tremendous war production job to do. But we do want to establish plans so that when the time does come we can move up quickly on this rearmament. We must be ready to meet the varying circumstances that may arise."

The Committee on Civilian Policy, which Mr. Nelson established last week to advise him on reconversion matters, got under way but despite the fact that the aircraft industry has probably more to gain or lose during the transition period than any other industry, it was not represented.

Plant Disposal—Meanwhile, the question of plant disposal came to the fore, although all other aspects of the demobilization problem there was a lot of discussion and no action. The points gave considerable space to a plan advanced by Interior Secretary Ickes that government-owned plants—including those for production of aircraft—be turned over to war veterans for operation, although Congress remained very cool to the suggestion and elsewhere it was looked upon with suspicion.

Declaring that government plants should be used to give vitality to American enterprise, Secretary Ickes said, "I know of no better way to accomplish this than to vest the ownership and control of these Government plants in the men and women who have served in our armed forces. These are the people who, we can be sure, will be interested in maximum production and maximum employment."

Riddle Testifies—Testifying before a Senate Military Affairs Subcommittee on pending legislation covering reconversion of industry, Attorney General Riddle urged Congress to exercise extreme care in drafting policies for the disposal of war plants in the post-war period lest a Government administrator be given power to prevent competition or regulate free markets.

Now this matter would be settled eventually the aircraft industry had no way of telling but if it was apprehensive it was because it could see \$2,262,000,000 in government-owned aircraft facilities scattered throughout the country and as yet no plan for disposing of or reconverting them.



MOSQUITO PRODUCTION LINE:

New photo shows part of the Final Assembly Division of defuncted Ford Aircraft of Canada, Ltd., where the high-speed molded plywood bombers are completed.

ACCA Urges Quick Reconversion Cash

Over-extended financial positions brought about by tremendous expenses superimposed on low capitalizations make it imperative that there be no pre-settlement reviews by the office of Comptroller General LeMay Warren, the House Naval Affairs Committee has been told by the Aeronautical Chamber of Commerce.

Provisions of the George-Murray bill in the Senate eliminate the pre-settlement review in the internal of quick reconversion. The Aeronautical Chamber's office, however, will review permits for fraud under terms of the pending legislation. This provision is expected to face a strong barrage in the House, and some observers are forecasting that Warren will be given preview authority there.

Sped Stressed—Charles C. Tilghman, Jr., general attorney of Bendix Aviation Corp., appeared for the Aero Chamber and told members of the House committee that the aircraft manufacturing industry is opposed to the review prior to settlement for the sole purpose that quickest possible settlements are essential to the survival of the aircraft industry after the program of industrial demobilization gets under way.

"The settlements survey cannot be achieved in time if reviews and audits in addition to these already in effect are required," Tilghman said.

Uniform Process Urged—The Chamber representative also recommended that separate procedures now used by the Army and the Navy be replaced by a uniform process, pointing out that the present procedures move far too slowly and urging uniform methods in streamlining the whole demobilization process expected later on.

Auto Plants Effect Cut in Plane Costs

Substantial price reductions in automobile-made products for aircraft are reported by the Automotive Council for War Production, in the face of rising costs in many commodities.

Price Cut \$100,000—The Council reports, for example, that automotive-made Liberator bombers now sell for \$237,000, compared with \$238,000 two years ago and that wings for Flying Fortress are sold at monthly savings of \$33,000, while price reductions on engines for lighter craft have amounted to 34 percent since 1940.

The government, the report said, is able to buy 20 sets of precision aircraft engine parts for the same price paid for less sets last year.

New Airworthiness Regulations Urged

Engineers ask clear cut division between air carrier and non-air carrier planes

Action to change the present system of airworthiness requirements for all types of aircraft has been initiated by leading aeronautical engineers who appear agreed that there must be a clear cut division between air carrier and non-air carrier planes.

Representative of the so-called categories of civil airplanes was given by the airworthiness requirements committee of the Aeronautical Chamber of Commerce at its recent St. Louis meeting, an endorsement which should have far-reaching effect since the committee members represented all leading aircraft manufacturers.

Represented by Norris and Peterson—The Chamber was represented by E. W. Norris, manager of the technical department and I. C. Peterson, Norris' associate in the department and secretary of the Committee.

Under the present system of airworthiness requirements there is a single transport category, with all other planes requiring special treatment. The Committee, representing current engineering thinking on the subject, would like to see all aircraft classified into certain categories for licensing and operational purposes, divide these categories into air carrier and non-air carrier groups, and set up several categories in each group.

Categories—For example, the air carrier group would be broken down into air carrier passenger, air carrier goods, and air carrier special purposes.

In the non-air carrier group, the tentative categories agreed upon include acrobatic, training or utility and normal or personal transport.

It is the opinion of many engineers that the present basis for requirements involves trying to predict the nature of operations for which an airplane of a particular design is intended. The weight will be placed on understanding the pilot's handling rather than requirements based on the type of operation.

Kanack House Subcommittee—Herbert Kanack, of Boeing, heads the subcommittee on non-carrier aircraft studies and R. A. Miller,

New Officers

New officers of the Airworthiness Requirements Committee of the Aeronautical Chamber of Commerce:

A. National Chairman: R. B. Boerleider, executive engineer, Douglas Aircraft Co.
B. Eastern Division: J. H. Gertler, chief structural engineer, Cessna Aircraft Co., chairman; G. W. Lester, executive engineer, Fairchild; Eugene L. Airplane Corp., vice-chairman.

C. Western Division: R. L. Stodden, structural engineer, North American Aviation, Inc., chairman; C. L. Rife, chief stress engineer, North American, Inc., vice-chairman.
D. I. C. Peterson, Aeronautical Chamber, secretary.

at Consolidated Vultee for the air carrier aircraft group.

The industry appears to be agreed that airworthiness requirements for air carrier planes will of necessity continue to be complex. On the other hand, so far as the personal-plane group is concerned, the industry believes it essential from an economic standpoint that the requirements be in the most simplified form.

It is significant that aeronautical engineers generally believe that altering or compressing new regulations for the express purpose of easing the transitional effect on existing airplanes is in the best interests of aircraft development.

Draft to Cost Coast Plants 8,500 Men

Seven major airplane companies on the West Coast expect to lose more than 8,500 workers to Selective Service if the directive for drafting men under 26 is carried out to its conclusion.

The Aircraft War Production Council estimates that, when the draft is completed on the under 26 age group, there will remain only 14 percent of total personnel under 26.

Machine Workers Lost—So far, Western airplane plants have lost more than 30,000 workers to the armed forces and present employment figures show about 60 percent now working are women, men over 40, handicapped or part-time workers.

Army Tightens Rule On Post-War Planes

Focuses on publicity given Convair's Model 39 and Douglas DC-7 in discussing from war effort.

West Coast aircraft manufacturers are feeling a near-anxiety reaction from their "best customer," the Army.

From fairly high levels of the military structure have come expressions of irritation over the publicity given to Consolidated post-war Model 39 cargo-passenger airliner and Douglas post-war DC-7.

Restrictions Tightened—Within the past week, the Army has tightened on the West Coast restrictions for admission into aircraft plants of writers now thoroughly aware that the aircraft industry is planning aggressively for post-war times, while meeting all Army demands for warplane production.

Washington clearance must now be obtained for writers and editors entering factories, even though they intend to go no further than public relations offices. And applications for clearance must state the purpose of the visit and what is to be talked about and written. This is not a new restriction, but simply Washington's insistence that an old directive be enforced to the letter.

Merle Foster—Warren Army headquarters, possibly reflecting Washington qualms, indicate their conviction that public display of post-war planning will be useless to the war effort.

Some officials on the West Coast point out that one thing overlooked is the consideration that when Convair and Douglas announce their post-war plans, thousands of aircraft workers, building warplanes—and their families—get a tremendous lift in morale.

The workers have visible, tangible assurance in newspapers, magazines and radio broadcasts that their companies are planning for the future, that their companies do not intend to close their doors when the war is won and consequently will be able to offer thousands of them the chance to continue work in the world's newest and most exciting manufacturing enterprise.

Woodrum War Policy Group Starts Work

Secretary Stimson scheduled to be first witness at open session.

Work of the vital Woodrum Committee on post-war Military Policy started this week, with Secretary of War Stimson as the first witness to an open session Monday.

The Woodrum group held an organization meeting recently, at which the members decided that all possible hearings—all public solving sessions—would be held as soon as possible.

Conference—A conference with Secretaries Stimson and Knox was held Friday by a subcommittee headed by the chairman of the full committee, Representative Woodrum, and Representatives Hayden, Vanden Bland, Andrews, Wadsworth and Mott, at which many of the subjects to be covered in the hearings were discussed.

Both the Army and the Navy have been making studies of post-war military problems and policies, and the material they have assembled will be placed at the disposal of the Woodrum Committee, set up as a select committee of 25 members to investigate the whole range of post-war military policy and requirements.

Will Study Aviation's Role—The committee is not a legislation-organizing group, but will make recommendations to standing committees and the House.

The most important single study will deal with aviation and the role it will play in the future security of the nation.

\$50,000,000 Planes Salvaged by RCAF

Aircraft valued at \$50,000,000 were salvaged by the Royal Canadian Air Force at Souderton, New Brunswick, last year.

A report of the RCAF filed at Ottawa listed 228 aircraft salvaged by the 143 men operating the base. Of this total, 229 were repaired and returned to service on Canada's east coast. The remaining 23, including a Flying Fortress, salvaged for the USAF, were damaged beyond repair, but more than half of their cost was salvaged as spare parts returned from the crash.

Scrap Salvaged—Aircraft which

FEDERAL DIGEST

Brewster Union Shop Provision Continued

NWLB issues order affecting Johnsville, Pa. plant; summary of week's activities in U. S. and war agencies.

By MARY PAULINE PERRY

A union shop provision in a contract between Brewster Aeronautical Corp. and UAW-CIO, covering employees in the company's Johnsville, Pa. plant, will be continued for the duration of the contract, National War Labor Board has ordered. The union called a strike in August, 1943, and the Board placed the case on probation for six months.

The arbitrator under the collective bargaining agreement recommended the present "open without representation" plan and production records at Brewster which beat the schedules despite reductions in manpower.

In addition, NWLB approved a separate collective bargaining agreement between the company and the UAW-CIO covering plant guards.



NWA FLIGHT CONTROL CLASS GRADUATES:

These officers made up the first class trained in flight control procedures by Northwest Airlines, which is contracting all Army flight control officers. First instructors in person at Seattle in a five-week basic training program, followed by a familiarization trip over the NWA route, and completion of training with advanced work at Minneapolis. This group picture shows Lt. Robert Aber, assigned to the Denver flight control office, Lt. Lawrence G. Penner, assigned to New York, Lt. Wendell Frazzette (standing), Minneapolis civilian and director of flight operations training for NWA, Lt. Richard E. Koch, assigned to Seattle, Lt. Louis L. Gardner, assigned to Memphis. Recently graduated from the school are to be stationed at all 13 Army flight control centers throughout the nation.

Wise Production Board announced that production of both AC and DC motors of less than one horsepower rose to new highs in February. Small motors for aircraft amounted to \$4,041,000 in February, 1944, against \$4,000,000 in January, 1943. Members of W.P.B.'s Fractional Horsepower Electric Motor Industry Advisory Committee were informed that requirements for aircraft motors of various small capacities and types should increase up to 38 percent during the early winter months.

The Aircraft Landing Equipment Industry Advisory Committee advised the House of Representatives that it had received a report from the War Relocation Authority that the Japanese Government had agreed to supply the United States with 100,000 small motors for aircraft. The report also stated that the Japanese Government had agreed to supply the United States with 100,000 small motors for aircraft. The report also stated that the Japanese Government had agreed to supply the United States with 100,000 small motors for aircraft.

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Davey Joins Bell

William Davey, formerly general manager of Curtiss-Wright Corp. Buffalo plants, has been appointed assistant works manager of the Niagara Frontier division of Bell Aircraft Corp.

Davey, who succeeds Don Rowe, is a veteran Curtiss-Wright employee. Rowe has been named manager of one of Bell's smaller plants in Buffalo. Davey joined the Curtiss-Wright plant in Garden City, L. I., 25 years ago when the company was known as the Curtiss-Johnson. From 1927 to 1929 he was factory manager for the Ireland Aircraft Co. maker of amphibious planes at Roosevelt Field on Long Island. He then returned to Curtiss at Buffalo and had remained with the company since.

Knollys Sees U. S. Dominating Market

British colonial airline interests might want to fly British equipment after the war, but will be "drawn into the American market" in the view of Vincent Knollys, chairman of British Overseas Airways Corp.

Knollys, in an interview given after a return from a 37,000-mile flight around the world in 80 days, said it was obvious that BOAC would be represented by an airline in South America because British investments there amount to 750,000,000 pounds sterling. "We are not neglecting the South American market," he asserted.

The British narrative cautioned that transportation costs at the price of the average pocketbook in trans-Atlantic travel would come sliding, depriving a prediction that airlines carrying 150 people would fly the Atlantic in one hop at 350 mph. For a cost of \$380

paired, as there is no fare in the material after the propeller passes through the duct.

Mode of fabric, asbestos and a synthetic coating of resin, the new product makes possible the lightening of the material used on these heating and ventilating air-duct systems by at least 10 percent.

New Line Held Used To Circumvent TCA

Investment firm head says Canadian interest in airline would be allegedly designed to by-pass Dominion policy.

Air Transport Ltd., organized under Newfoundland laws for trans-Atlantic operations, is being utilized by Canadian interests to by-pass the Canadian government policy of having trans-Canada Air Lines take international operations out of Canada. Russell Bell, president of Greenfield and Co., Montreal investment bankers interested in financing of the new line, has told Aviation News.

The airline is regarded by Smith, Barney & Co., New York financial house, as a private venture. Fred Johnson, member of the firm, says Johnson said he could not elaborate on the original announcement of the projected line, which would demand approval landing and operating rights to connect various airline operations through Newfoundland or Labrador in the North Atlantic service.

Stock Offering Planned—Johnson said he would not make public offering of the stock in the post-war period if plans for the line are consummated. He said the extent of American participation would be 25 percent, with the balance in equal shares in Canada, England and Newfoundland.

English participants in the venture have not been revealed according to Johnson, who said no decision had been reached.

Financing—Bell said Greenfield and Co. had been handed the financing of Canadian Colonial Airlines, which operates out of Montreal to Albany and New York. It also has handled a number of bush air transport companies.

Smith, Barney have handled Eastern Airlines Association, have been a large participant in Pan American lines, and with Lehman and other financial groups participated in TWA financing.

PRIVATE FLYING

Post-War Business No Problem To Builders of Ecoupe Planes

Company's expansion in subcontracting work not so great as to make plant topology for shift into peacetime production; several thousand orders received.

By BLAINE STUBBSFIELD

Engineering and Research Corp. had built about 112 Ecoupees in 1941 when war priorities on materials brought production to halt. The little all-metal monoplane, a first-generation descendant of the Weick W-1, had been enthusiastically received, but the company put away its airplane plans and went into the program of subcontracting aviation products for the duration.

Nearly all the 112 Ecoupe 411-C's are still flying and their reputation for economy, ease of handling, and safety has spread among pilot and air-minded people to such extent that now, with no advertising and no production in immediate view, orders have piled up to several thousand, and applications for agencies are being filed by scores from all parts of the country and some from abroad.

Post-War Position Good—The Management of Ecou, a contraction of the words Engineering and Research Corp., has nearly all the war troubles the aircraft producers are heir to, but it is fortunate in some ways. For one thing, its plant and work staff were as small before the war as they now, expanded several times over, they are not too big for peacetime business—if business is good and if the government's contracts are tapered off, not chopped off. A shop-off policy would force most other aircraft builders to let their skilled men scatter or else keep them in and pay out cash reserves in payrolls before civilian production could start.

Ecou is fortunate, too, in that its plant layout and tooling has been designed to produce its present orders for gun barrels, and bombs, composition propellers, and other items. The management will be able to get back into airplane

production in a minimum of time. If war orders were cut off suddenly, Ecoupees could be delivered in less than a year. But the company would be pleased, of course, if war orders could be tapered off and airplanes tapered in at the same time. Some of the large aircraft producers have indicated intention to go into non-aviation production, but Ecou probably will stick to airplanes and its other prewar products.

Minor Changes—The immediate post-war product will be the 411-C with very slight changes. Under consideration for addition to the line is a design with more than the present 55 hp. Company believes there is a definite place for a four-passenger ship and may decide to build it. This model might possibly carry two flat-opposed engines, which can be bought now for the price of one of equivalent power some years ago.

Ecou admits the utility of conventional airplanes is limited, and they agree that conventional designs will permit for some time. But they believe acceptance of private aviation will have gone a long way by the time post-war plans are put on the market in volume. Expansion of the airport system, improved safety features, weather service, and comparatively lower prices will give the airplane utility equal to that of motor boats. Civil Aviation Administration finds that 350,000 boats are or were registered, and that about 41,000 a year are normally sold. Ecou thinks that light aircraft should approach that of light powered watercraft in the 1950's.

Design Begins 13 Years Ago—The Ecoupe Ecoupe 411-C weighs 725 pounds empty; 1,280 gross, carries two persons and 45 pounds of baggage at a cruising speed of 105

mph, carries 33 gallons of fuel for a run of 300 miles; cruise speed, 930 feet; rate of climb, 900 feet per minute; takeoff run under optimum conditions is 315 feet; wing loading is 8.6 pounds and power loading is 18.4 pounds.

Design of the Ecoupe type airplane was begun 13 years ago by Fred Weick, who was then on the engineering staff of the National Advisory Committee for Aeronautics at Langley Field, and is now chief engineer of Ecou. Mr. Weick built his original W-1 safety plane as a private project in his garage near Langley. It was among the first of the safety planes designed for non-professional pilots.

When John George joined his Development Section in the Bureau of Air Commerce in 1934, he searched everywhere for experience which would contribute to the development of a safe, simple and acceptable aircraft. He found the valuable data from NACA test records on the W-1. The Bureau's development project was later discontinued because of industry opposition.

For Private Flyers

This week Aviation News introduces a regular department on private flying, with an emphasis on the news of significance to the thousands of post-war private pilots. Contributors, distributors and subscribers of personal aircraft.

Highlighting the department is a series of 1944-to-the-minute stories written from information gathered at airports, the nation's leading laboratories, plants. Blaine Stubbsfield, staff writer, who has already begun a line of eastern light-aircraft features.

Mr. Stubbsfield, a former pilot and well known for his writings on Aviation News as well as in Aviation, Air Transport, Business Week, and American Merchant, will be assisted in preparation of the new section by the editors of the News in Washington, New York, Dayton and Chicago.

Week to week developments in civil air regulations, light-plane production trends, flight safety, and other aviation-related news will be fully covered in the new department. Comments are invited and, in a few cases, illustrations will be prepared on those subjects requested by the most readers.



Weick W-1 and Descendant "Ecouage": Orders already are piling up at Engineering and Research Corp. for the Ecouage, shown here with two views of its antecedent, the W-1. Simplicity and unique safety features caught the fancy of air-minded people. The W-1 was modern in principle, had most of the Ecouage's safety features, but it "looked funny." It is a single design innovation: it became a streamlined, low-wing monoplane, converted from a pusher to a tractor. It is powered by a 60-hp Continental engine. Fred E. Weick, chief engineer, designed the W-1 about twelve years ago.



- **Features**—Outstanding features of the Ecouage, which spring directly from the W-1, are:
- Tricycle landing gear with castoring nose wheel, steerable if desired.
- Longitudinal and lateral stability with definitely limited upward elevator travel to prevent loss of

control due to stalling and spinning.

► Two-control operation, with the elevators actuated by the control column, and ailerons actuated by the hand wheel. The rudder is ordinarily connected with the wheel. There are no rudder pedals.

The company does not believe

a machine can be developed to serve satisfactorily as both airplane and automobile. Detachable wings would be inconvenient for flying, and folding wings would be awkward for surface travel. The bulge necessary to power the wheels, and for storage, would be expensive and heavy. However, they believe that an airplane whose wings will fold and which can be towed easily from port to hangar is feasible, and they expect to work on it in time.

New England Port Operators Organize

Formation of the New England Aviation Trade Association by more than a score of airport operators has been announced in Boston by an organizing committee headed by Lee Brennan, Quincy, N. H., chairman, and Joseph Garande, Norwood, Mass., acting secretary.

► **Permanent Group**—Garande said the association is designed as a permanent organization for the development of aviation in New England and that its membership was made up of men closest to private and personal flying in the northeast.

The association plans to keep in touch with all matters important to aviation as a means of transportation in New England, and Garande said the group was desirous of helping aviation to grow and to aid with problems at any and all airports.

Illinois U. Builds Laboratory-Airport

Designed as a laboratory and center for aeronautical activity, an 800-acre airport with runways to handle the largest aircraft is being built at the University of Illinois, the first unit of facilities for education and research in various phases of aviation.

► **Open for Military Use**—It is expected the airport will be open for military and commercial use by fall. Initial construction includes three 5,000-foot paved runways, 150 feet wide, a control tower, administration building, hangar, shops and canteens.

Eventually the University plans to have in one unified facility complete plant and personnel requirements.



Curtiss Helldiver Attack Role

Helldivers

long range, hard hitting fists of the fleet



The stepping stone to Tokyo

are feeling the heavy tread of our march across the Pacific

The reduction of these island bases has called for an Army-Navy air attack team of unparalleled striking force. Spearheading this attack has been the Navy's fighter, torpedo bomber, dive bomber team,

brought to its highest point of effectiveness, the Navy impacts, by the performance of the Curtiss Helldiver.

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Armor for the Knights of the Skies

Breeze Aircraft Armor Plate Brings 'Em Back Alive
in World-Wide Theatres of Warfare

Breeze Armor Plate, for America's fighting aircraft, has brought home many a pilot and gunner, has saved not only valuable equipment, but priceless lives as well.

Manufactured by the Breeze Aircraft Heat Treating Process, this Armor is engineered in unusual shapes and sizes to designers' special requirements. The most severe tests, conducted with actual fire, have proved that Breeze Aircraft Armor Plate is unequalled in ballis-

tic qualities and resistance to shatter. This is due not only to the special Breeze process of liquid carburization, but also to Breeze-developed methods of welding — quality workmanship which produces a joint as dependable as the Armor Plate itself.

In quantity maintenance today, Aircraft Armor Plate supplements the well-known Breeze line of accessories that are serving America on land, on the sea, and in the air.

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Warfare experience is heat-treating, welding and plating. Breeze will analyze these to manufacture products of the highest quality for peace-time use.

THE AIR WAR

COMMENTARY

Air Strategy Plays Vital Role As India-Burma Fighting Resumes

Drive for opening of Leda Road and ultimate junction with Burma highway would reopen supply line for Chinese and Chennault's 14th Air Force.

We may not know for several more weeks who out-manned whom in the isolated North Burma campaign of the Allies and the Jap counter-move into the Indian state of Manipur. It is obvious now, that both had been planned for some time. The stakes on both sides are higher than appeared at first. Two years ago (Apr. 28, 1942) Jap armored forces, aided by strong air support, captured Lashio, terminus of the Burma Road. Three days later Mandalay fell. The continued resistance of the Chinese north of Mandalay kept the Japanese forces in Central Burma engaged, helping to cover the British withdrawal. General Stilwell and his party began their amazing journey through the jungle, and it has been his burning ambition ever since to get back there and drive the Japs out.

► Allied Drive Resumed — Five months ago two Chinese divisions moved into the Mogaung Valley and launched an offensive to pave the way for construction and extension of the Leda Road, with the great enemy base at Myittha in the first objective. The ultimate goal was to join with the Burma Road, reopen a supply line for the Chinese army and General Chennault's Fourteenth Air Force. This reinforcement, plus a newly stepped-up air supply, would mean establishment of operational bases near the Chinese coast for one part of the all-out air assault against Japanese shipping and the industrial homeland.

► Enemy Stakes — The Jap strategy is to check this air assault. If the enemy can gain a strategic hold on the Bengal-Assam railway (Calcutta-Dacca-Dumrao-Sadiya), General Stilwell's entire North Burma campaign would fall all

for naught, would go the surprise tactics of Wingate's Raiders, Chennault's Air Commandos, Merrill's Marauders and the steady, dogged fighting of the Chinese and American forces of General Stilwell and General Sun. Along this vital railway, narrow gauge and antiquated as it is, flow the gasoline, supplies and parts necessary to keep in the air the bombers, fighters and above all the transports under General Stilwell's Eastern Air Command.

With Imphal surrounded and Kohima partly cut off by three large Jap columns, with Dimaupur on the railway but 35 miles away, the threat looks more than real. That the enemy will get to the railway and temporarily disrupt traffic from time to time seems a foregone conclusion. If he can dig in around Imphal and Kohima before the noonday break in around the middle of May it will take a first rate effort to dislodge him,

and our longer range plans may be thrown in jeopardy.

► Air Support — On the other hand if Allied forces can capture Myittha and cut off the enemy supplies from the rear, the shoe may be on the other foot. This is what happened a few weeks ago when the Japs had the 7th Indian Division of the British 14th Army in a very tight spot in the Arakan Hill district. The Allies were able to establish complete air supremacy and keep their forces supplied from the air, and then attack the enemy positions and water-borne supply routes with Hurricane fighter-bombers and Vulture Vengeance dive bombers of the Far Eastern Air Force. More than 14,000,000 pounds of supplies, chiefly food, water and ammunition, were dropped, and after three weeks of hard fighting the Japs found themselves in the very position they had planned for the British. Their Japs were cut up and they were obliged to withdraw as best they could, leaving behind large numbers of dead troops. With the Mandalay-Myittha railway cut in two places by the British, Imphal, Kohima and Mogaung under serious threat by the Marauders, Gurkhas coming down from the north and Chinese troops from Yunnan to the east, it appears now as if Myittha could be taken. Further moves to the south, at such red points as Mawla and Indaw, and against bases on the Irrawaddy River such as Katha, would cut off the Jap invaders of Manipur. (This is the area in which the airborne troops were landed.)

► Airborne Invasion — If the enemy

ORGANIZATION FOR THE BURMA CAMPAIGN



BOOSTS TAKE-OFF**BOOSTS CLIMB****BOOSTS CEILING****BOOSTS LOAD**

WHAT IS "FLYING

HORSEPOWER"?

ANSWER:

The new super fuel power ingredients that tremendously increase the power of American planes—the result of Socony-Vacuum's eleven years of research—\$90,000,000 investment in new refining facilities—the greatest Catalytic Cracking development program in the world.

FLYING HORSEPOWER" is our name for our new super fuel power ingredients that are boosting America's air power today and are opening new performance possibilities for commercial aviation after Victory.

It has come—not miraculously overnight—but through a period of 11 long years of research in Catalytic Cracking. It is the product of our great development after another.

"Flying Horsepower" is here—not in limited laboratory quantities—but in a swelling flood of basic stock, streaming from 14 Socony-Vacuum refineries. It represents an investment of \$90,000,000 in new equipment and facilities.

Today, every drop of "Flying Horsepower" is going into the new aviation

fuels that are flowing to our bases in England, Italy, China and the Pacific. Boosting the power of these fuels, it's helping make possible shorter, faster take-offs, faster climbs, higher ceilings, bigger payloads and wider range.

And this is just the beginning. After Victory, "Flying Horsepower" will contribute to the development of the new super transports and air freighters now on the drafting boards. Our new new refining facilities, strategically placed throughout the country, will furnish vast supplies of this super fuel power to help America keep its superiority in the air.

SOCONY-VACUUM OIL CO., INC.
30 Broadway, N. Y. C., and Affiliates: Magnolia Petroleum Co. (American Petroleum Corp.)



View from SOCO Refinery at Elizabeth, Oregon. One of our new Socony-Vacuum units, the "Catalytic Cracking" unit, is shown in the foreground. A flood of basic stock for new aviation fuels.



NEW MOBIL OIL AERO TO MATCH!

Along with "Flying Horsepower" to boost aviation fuels, Socony-Vacuum has developed a new Mobil Oil Aero for aircraft. Already proved under extreme service conditions, this new oil provides exceptional wear-resisting qualities, and long hours of economical operation.



More Power for America's Wings, Now and After Victory

"FLYING

HORSEPOWER"

Mobilgas for Aircraft Use!

is ultimately cut off, much of the credit will go to one of the most significant tactical operations of the entire war—the airborne landings of British and Indian troops far behind the enemy lines in American gliders and transports of the troop carrier command. The story made headlines all over the world (maybe not in Tokyo), and behind the spectacular event itself lay months of careful planning. Two of the Army's crack P-48 pilots had a lot to do with it—Col. Philip Cochran, whose determination to get into the Tannu-Sai campaign and during exploits while there are well known, and his deputy commander Lt. Col. John Allison, one of Col. Bob Scott's squadron leaders in China. Another feature of the northern Burma campaign, second only in interest to the remarkably successful air supply organization, is the effective use of "crashbeeper planes" for evacuation of the wounded and carrying of light supplies and messages.

► **The Larger Air Campaign**—Although the spotlight is on the rap and tank struggle to cut supply lines of the opposing forces, in the long run the importance of India as a rear base for a devastating air assault against Japan should not be overlooked. This has been the expressed objective ever since General Brenton first arrived at New Delhi in February, 1942. The accompanying chart shows the



B-24 A TIGER SHARK:

This Consolidated B-24 Liberator, on flight lines at Patterson Field, is overhauled and ready for combat with a Tiger Shark design painted on the nose by an Air Service Command worker.

over-all organization as far as it has been announced to date.

NAVATION

AAF School Trains Aviation Engineers

Little publicized, but highly important in the development of aviation, is the establishment of the AAF Engineering School at Materiel Command headquarters at Wright Field, which will provide training in basic and specialized phases of aeronautical engineering for a limited number of qualified officers.

The purpose is to direct properly qualified officers, preferably with combat experience into a field which will employ their qualifications and experience for the AAF and to produce a flow of younger officers to the Materiel Command, thus insuring a continuity of effort.

► **Young Officers Trained**—At the same time, it will provide a means of examining younger officers with a view to selecting the most promising for permanent commission in the Army after the war and improve the professional qualifications of officers with engineering training, thus benefiting them personally and subsequently the aircraft industry, if they are not retained by the AAF.

The AAF feels that the impor-

tance of their engineering school cannot be over-emphasized, since maintenance of superior quality in future AAF material will depend in large measure on the technical training and foresight of responsible officers.

► **Three-Months' Course**—The engineering school course will be approximately three months and the curriculum will include a review of basic engineering subjects and other specialized subjects.

Canada Adds Planes For Troop Airmail

More aircraft to handle troop mail between Canada and the Mediterranean have been purchased. The improved service will save up to 18 days on airmail letters.

Numbers were not disclosed, but a lighter type of aircraft is to be based at a western Mediterranean airport to permit round-trip service on the circuit every five days, and often as mail quantity requires.

► **1,500,000 Letters a Month**—Armed forces air letters carried monthly over the Atlantic now average 1,500,000, with delivery six to fifteen days after posting. During the eight weeks the ECAC mail service has been operating 48,000 pounds of mail.

RIGHT ON THE TARGET



WITH THE HELP OF THE M-H AUTOMATIC PILOT!

The Minneapolis-Honeywell Electronic Autopilot not only improves the accuracy of precision bombing, but it also shortens the bombing run so that pilots can go into evasive tactics sooner.

Minneapolis-Honeywell was the first to apply electronic control systems to aircraft. The widely acclaimed Electronic Autopilot, however, is only one of a number of M-H electronic controls and devices in daily use on fighting planes in all theaters of war.

The engineering genius and skill responsible for these exclusive and important electronic control systems for war will contribute to the development of controls and devices for cargo and transport planes when the war is won.

Minneapolis-Honeywell Regulator Company, Aeronautical Division, 2947 Fourth Ave. S., Minneapolis 8, Minnesota Branches and distributing offices in all principal cities.

Axis Has Gasoline

Neither Germany nor Japan is undergoing a shortage of high octane gasoline fuel for aircraft, War Dept. officials agree, although it is true that neither country uses much gasoline lighter than 87 octane, while the AAF employs much fuel of 100 octane or higher grade.

Although flight training in the German air force has been curtailed, Germany has large amounts of high octane gasoline. There is, however, a definite shortage of diesel oil and lubricants.

Japan, in the opinion of War Dept. officials, has enough high octane gasoline for over two years, with at least five years' supply of motor gasoline. In addition, she has about a year and a half's supply of lubricating oils.

ELECTRONIC CONTROL SYSTEMS
for the AERONAUTICAL INDUSTRY

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RYAN Stearman, widely used in training, is the most famous of all.



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RYAN Stearman, widely used in training, is the most famous of all.



RYAN Stearman, widely used in training, is the most famous of all.

Why the Score was 93 to 6

The report on that recent amazing air battle, when 93 Japanese planes in the South Pacific were destroyed in the air with a loss of only 6 American aircraft, has been confirmed and made official.

The analysis of military experts gave much credit to the superior fire power and armament of the American planes. But they all came to one conclusion: That the American pilots were better because they were better trained. To this they gave most of the credit.

Close to the heart of every member of the Ryan manufacturing and training organizations are the thousands of combat pilots trained in Ryan planes and by the Ryan

schools—who are now fighting on every front. Seventeen years' experience making commercial pilots and four years training military flyers has enabled the Ryan School of Aeronautics to play an important part in giving America the better trained pilots, whose superiority is attested by outstanding combat records and hundreds of decorations for aerial skill.

For years Ryan training has been based on thoroughness and exactness. Now entirely devoted to training military pilots, Ryan Schools is practicing what continues to be dedicated to the same high standards.

RYAN SCHOOL OF AERONAUTICS, operating under the name of Ryan, Inc.,



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GENERAL OFFICES: LINDBERGH FIELD, SAN DIEGO, CALIFORNIA

PERSONNEL

Col. Joseph Eugene Fox, recently retired from active duty in the Army, has been appointed special representative for TACA Airways Spikes, with headquarters in Washington. Twenty of his 35 years in the Army were spent working with Spanish-speaking peoples. In the World War I he served the Distinguished Service Cross for gallantry in action, and later was awarded the Distinguished Service Medal for bringing about a cessation of hostilities between the Republics of Ecuador and Peru.

Hugh A. Dendryer has been named director of research for Southern Airways, Inc., Birmingham, Ala. Already he is preparing data for the company's application before the Civil Aeronautics Board for airline routes. Dendryer is head of the firm of Hugh A. Dendryer, advertising, of Charlotte, N. C., and Hugh A. Dendryer and Co., public relations, of Atlanta, Ga.

Col. Frederick E. Gage, Jr., has been appointed budget and fiscal officer of the Material Command at Wright Field. He previously held the post of redistribution and salvage officer, a post which has been discontinued, and whose duties have been absorbed by the production division of the command.



Col. Frederick E. Gage, Jr., has been appointed budget and fiscal officer of the Material Command at Wright Field.

Col. Ray W. Leggett, who has been acting chief of staff to Maj. Gen. John F. Carr, commanding general of the Army Air Force Western Technical Training Command, has been appointed to that position according to a Loring Field announcement.

Snider Osborn, assistant vice-president of Eastern Air Lines, has returned from a trip to Buenos Aires.

Officers have been announced for the newly formed Cascade Plywood Corp., Portland, Ore., which recently took over the Douglas fir plywood operation of the Ryan Products Co., at Lebanon, Ore. M. D. Tackes, who headed the Ryan organization, is president. C. W. Row is vice-president in charge of operations. E. V. Hansen, vice-president in charge of sales, W. K. McKinnon, treasurer, and B. E. Capus, secretary. All led



Lortie

Captains were associated with Tackes in the Evans company. Captains have had long legal experience in the northwest.

Ernest B. Koshke has been appointed chief test engineer of Kallit Aircraft Corp., to assume full responsibility for all engineering test work, including the flight test section and the testing laboratory. Koshke formerly held the position of chief research engineer with the Elton Co., of Midvale, Colo.

Col. Leland P. Loomis, director of the Navy's Bureau of Public Relations, is being assigned to sea duty and will be replaced by Rear Admiral Aaron S. Mowbray, until recently a



Lortie

Merrill

commander in the Pacific. Captain Lortie is well known to the aviation industry, having secured many plane plants and installations in connection with his position. He is the author of several books. Admiral Merrill, a regular Navy officer, has been commander of several task forces in the Pacific.

C. G. Goss, manager of the Detroit branch of the plane division, Massachusetts Chemical Co., has been appointed sales manager of the division's Tennessee department at Springfield, Mass. Carl Whitcomb, member of the technical service department, replaces him.

Col. Howard H. Cook, former chief of the Material Command proper laboratory, Wright



Col. Howard H. Cook, former chief of the Material Command proper laboratory, Wright Field, has been reported assuming since Mar. 15, from a two-month assignment in the Pacific theater. A World War I flyer, he was at one time associated with Curtiss Aeroplane and Motor Corp. He holds ratings of balloon pilot, amphib pilot, airplane pilot and airplane observer.



WILSON PRAISES CORSAIR FIGHTERS:

B. D. Telephoto, factory manager of the Chance Vought Aircraft plant, Stratford, Conn., left, and Ray B. Bess, general manager, right, meet the pilot with WPA Executive Vice-Chairman Charles E. Wilson. Wilson praised the "one-of-a-kind" production of the Vought F4U-C Corsair fighters being built for the U. S. Navy.

EXTRA HELP

for Design Change Problems...

REYNOLDS is far more than a great new source of aluminum... it is a complete aluminum service. From the sketch to the finished part, Reynolds' facilities speed production and lower costs.

When design changes threaten to play havoc with your phase production curve, Reynolds can help you by putting additional resources, experience and engineering skill at your disposal. When you are trying to assemble previous designs and get new models into production simultaneously, Reynolds pre-fabricated plate parts will smooth your operations and enable you to switch to improved models without lost time.

Reynolds offers two types of plate parts service—completely pre-fabricated and semi-finished. Pre-fabricated parts are ready for the assembly line when received by the plate handler... carefully cut and forced to the closest tolerances. Semi-finished parts are treated to the required contour in the Reynolds plant... ready for further forming or other finishing operations.

Accurately controlled speed is the order of the day... and pre-fabricated plate parts are helping speed plate production by eliminating thousands of otherwise wasted man-hours. When pre-fabricated parts are used, only the aluminum actually built into the plate is shipped... the 86% scrap loss is held at the Reynolds plant, to be converted back into new metal in a matter of days instead of months.

Your inquiries on any phase of this complete Reynolds service are invited. Reynolds Metals Company, Aluminum and Parts Div., Louisville, Ky.

Reynolds pre-fabricated plate parts save thousands of man-hours. Finished two ways—carefully finished to closest tolerances, ready for assembly... or accurately blanked, riveted and drilled—ready for final finishing.



Finishing plate parts at the Reynolds plant. All parts are worked to required tolerances and ready for assembly.



One of the most powerful hydraulic presses at the Reynolds plate plant. Equipment is available to produce practically any type or size of aluminum part.



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**Will you be the one
to discover this new
DAZOR Floating LAMP
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Think of a lamp that floats the light exactly where it's wanted, as easily as a man can move his arm... a lamp that stays put without locking... that brings new efficiency to localized lighting, thus increasing production and lowering costs.

LOOK at the Dazor Floating Lamp because it's new and different. But look into its usefulness for the advantages it offers you: increased output, lighter time saved, improved accuracy and safety.

The object of localized illumination is to have enough light and daylight light at the point of work. The Dazor Floating Lamp provides high intensity light.

Always ready to any direction



plus new flexibility for the individual job and operation.

Each machine tool, assembly line, or inspection bench or drafting board has its own problem of illuminating the working area. With a slight touch, an employee shifts the Dazor Lamp to any position desired. He can raise, lower, peak, pull or turn it—the light stays where it is placed. No screws to tighten! A single spring force acting through an ingenious design and set positioners balances the lamp over its four pivots. Both fluorescent and incandescent lamps are available, with an option of 4 bases.

In thousands of industrial and govern-



mental operations, Dazor Floating Lamps are today speeding wartime production, curtailing spoilage, relieving fatigue, saving money. Will these factors be any less important tomorrow? Because lighting improvements is an executive responsibility, we advise you to investigate Dazor Floating Lamps now. They are described by electrical schematics, carefully selected for ability to serve particular operations.



Call your electrical wholesaler supplier at once for the names of our distributors in your locality. Upon request for Bulletin "70" we will also send this 16-page illustrated brochure describing Dazor models, features and applications.

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DAZOR Floating LAMPS
FLUORESCENT and INCANDESCENT

Colonel Couch holds several patents on propeller inventions and patented in Argentina an invention of propeller vibrations.

Admiral Alberto D. Boust, formerly Argentine naval and air attaché at the Argentine Embassy in Washington, will leave that country as soon as his replacement arrives from Buenos Aires.

Jose Navarro Hinojosa, formerly head of Lazaro Avion Navigation, recently purchased by Aerovias Brazil, has joined that company as vice-president and a member of the board of directors. Other officers and directors elected at a recent stockholders' meeting in Mexico City are: T. R. Boush, president; Antonio Gomez, vice-president; C. G. Adams, treasurer; and Jose N. Dohas, secretary. Adams serves also as treasurer of Brazil Airways.

Col. George W. Rowland in the new AAF contracting office at Consolidated Victory's Value field. He went to the division from his duties, Colo., Army Air Base.

A. K. Smith has been appointed factory manager of the Buffalo plant of Curtiss-Wright Aircraft Corp. All the manufacturing divisions will report to him.

Lane, (of N. M. Grady has reported to the University of Texas CAA-WPA school for duty as flight training officer. He operated a civilian pilot training school at Fairview, VI, before joining the Navy in December, 1942, and served a tour at duty at the Navy CAA-WPA school at Rouse's College, Salem, Va., before his new assignment.

Uruguay has sent four officers to the country to study aircraft construction. They are: Luis Gera Pissone, Luis Mamed Adams, Enig Juan Sanchez and Ramon Jose Bismara.

Donald D. O. Langford, formerly assistant to the division engineer of Pan American Airways' Atlantic division, has been named general staff officer at the Transatlantic Terminal, LaGuardia Field. In charge of the engineering section concerned with projects involving maintenance of the 48-lin Clippers, he will be taking over the duties of the assistant division engineer.

Robert E. Gross, president of Lockheed, was named to the Advisory Committee on Development, Production, and Extension of Industry to the State Reconstruction and Employment Commission, designed to assist in planning California's post-war economy in which Governor Earl Warren appointed Arthur H. Hays Sulzberger a member of the committee.

K. T. Vaughan, vice-president of Magnesium Products, Inc., has joined the Los Angeles office at Dow Chemical Co., where he will be in charge of magnesium sales activities for the Pacific Coast.

The Aero Equipment Corp., Cleveland plant has received a white star for the Army-Navy "E" production, according to J. C. Macken, president. J. F. Johnson, vice-president, is in charge of the Cleveland plant and A. N. Ahlstrom is factory manager.

Col. Walter Lewis John Bacon, USMC, has reported for duty to Marine Corps Aviation Division headquarters in Washington.

Condy L. H. Haste, USN, was detached from the Navy's Personnel Planning Division, Headquarters Service of the Office of Deputy Chief of Naval Operations for Air.

Walter E. Tins has been elected vice-president in charge of export trade relations for Sperry Gyroscope Co., Inc. He was formerly general plant manager.

William S. Birren has been named sales and service manager of the Wright Aeronautical Corp. Birren went to work for Curtiss Aeroplane and Motor Co., in 1935 and with the acceptance of a brief period of work as a calibration engineer and designer, has been with either Curtiss-Wright or Wright Aeronautical since that date. John T. Wenzel, formerly assistant service manager, has re-



FORMER UAL PILOTS.

Capt. F. W. Clem, right, who flew Admiral Lord Louis Mountbatten's personal Douglas DC-3, was a co-pilot with United Air Lines before joining the Army. He is pictured with Maj. Alfred F. Tucker, another United pilot, who occasionally flew with Clem on the New York-Chicago run. They are shown at a New Delhi base.



Metall Bureau
placed Birren as service manager of the company.

Robert C. Hallett has been named assistant district traffic manager of the Atlantic Division of the American Airway, with office at LaGuardia Field. Prior to his new appointment, Hallett was Pan-Am's assistant representative and district traffic manager for the west coast of Africa. He has been replaced by James L. Boynton. At the same time Pan Am transferred to him William A. Holcombe, formerly at the London terminal, will take over Boynton's duties as airport traffic manager. While Richard Gordon will transfer from the post of airport passenger supervisor to assistant airport traffic manager.

V. A. Johnson has been named factory manager at Fairchild Burlington plant where he has been serving as production manager of production planning. At the same time N. V. Krutiger was named production manager in addition to his duties as director of procurement.

Named Commodore

Capt. George A. Seta, Naval aviator, has been nominated by the President for the rank of Commodore, while serving as Chief of Staff at Commander, Air Force, Atlantic Fleet.

TELLING THE WORLD

Richard C. Walker, manager of Pan American's radio-advertising department since its formation, has been named to a new position in the Navy, on leave from Pan American. Kenneth C. Guber, formerly production manager for the airline, has been appointed acting advertising manager. Both have wide experience in advertising.

Frank Edmon has resigned as assistant director, public relations, General Motors Corp., and has opened his own public relations office in New York City. *30ky* Matter, the story of Donald Douglas, written by Frank Cunningham, is being made the basis of a film depicting the development of aviation and the aircraft industry. The new movie will carry the title *It's a Small World*.

AIRCRAFT PRODUCTION

New P & W Plant at Kansas City In Production on 2,100 Hp. Motors

United Aircraft Division expected to reach top rated horsepower output of 3,000,000 per month in about a year.

By SCOTT HERSHY

Top category in importance has been given by the military to the output of Pratt & Whitney's new engine plant at Kansas City, which is now turning out the powerful new R-2800-C engine officially rated at more than 2,100 hp.

The new plant, which with its tools was designed specifically for the output of this engine, has a capacity of 3,000,000 a month, which officials expect to reach in about a year. At present, the plant has about half of the 20,000 men and women who ultimately will be employed.

Labor Problem—Manpower at this facility, so elsewhere in the aircraft industry, is a major problem and plant officials estimate that about 250 persons a day must be hired to meet production schedules.

Of the 1,600 parts which go into the R-2800-C, more than 600 are

manufactured in the Kansas City plant. The rest come from subcontractors such as Eison Manufacturing Co., which supplies crank shafts.

45 Percent Women—About 45 percent of the employees are women and about 80 percent of the people in Pratt & Whitney's downtown school are women. While some supervisory personnel has been sent from East Hartford, the company has drawn largely on the Kansas City region for operations heads.

The key role which this plant is destined to play prompted Rear Admiral DeWitt C. Ramsey, chief of the Navy's Bureau of Aeronautics, and Brig. Gen. Edwin S. Perrie, deputy chief of air staff to open the plant to inspection by an AVIATION NEWS representative and other newsmen last week.

No. 1 Priority—The Navy has

described the plant as its No. 1 priority. The plant was built and is being operated under sponsorship of the Navy. This is part of an arrangement by which the two services have divided sponsorship of certain key production activities. This does not mean the Navy alone is interested in the new plant or the R-2800-C engine.

Admiral Ramsey commented that this new engine "in its conception and ultimate development, cannot be matched in the power weight ratio by any products I know of at the present time that may flow from the production resources of Mr. Hitler and Tojo."

Non-Profit Setup—J. Marshall Horner, president of Pratt & Whitney, pointed out a situation which has few, if any, precedents. "In line with United Aircraft's announced policy of limiting profits on war contracts, and since this plant was to be entirely Government-financed, we requested and obtained a Navy contract for operation of the plant without profits for the corporation—not even a management fee. Our contractual relations with the Navy for supplying engines from the Kansas City plant are, therefore, to act as agent for the Navy in operating the plant without remuneration to United Aircraft or its wholly-owned subsidiary, Pratt & Whitney Aircraft Corp. of Missouri."

Horner noted, however, that, while production is beginning to roll at the Kansas City plant, "we



Increased electrical equipment demands dependable Aeroelectrics

Light weight (50 pounds), vibrationless, designed to aircraft specifications, dependable LAWRENCE AEROELECTRICS have power outputs ranging from 5 to 12 KW and meet ever-increasing electrical power demands. The versatility of this compact generating equipment aboard today's aircraft is proof of its possible application to many different uses.

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Hydro Aviation Equipment



NEW PRATT & WHITNEY KANSAS CITY PLANT:

This new facility, specifically designed for production of Pratt & Whitney R-2800-C aircraft engines, is on a site of 352 acres outside Kansas City. Floor space in

the building is approximately 40 acres, of which some 22 are machine shop area. The machine shop area and the assembly together comprise about 30 acres.



LIBERATOR MINUS CAMOUFLAGE

A late model B-24 Liberator bomber, one of the first of this current type to leave Consolidated Vultee's plant at Fort Worth, is shown in the foreground. In the background, ready to move from the assembly building, is a British modified B-24, painted white.

have a long way to go still." He said that great Navy plant has the "product design for the most advanced type engine in production anywhere in the world today."

Building Manganese Dioxide—Admiral Ramsey and other high ranking Navy and Army officials accompanied newspaper and magazine writers through the plant.

Forces New Ships—The uses to which these new engines are being put, was illustrated by Admiral Ramsey when he said that "such famous fighter types as the P-51 Mustang and P-47 Thunderbolt, already the design of the Republic, will reach even greater heights of performance with the new Double Vamp engine. Others so new that I am not at liberty to disclose names or identifying symbols also will be powered by your engine." In this connection he mentioned Ford's new cargo plane, which has been pictured and described by Aviation News, and Republic's P-47 Thunderbolt.

Admiral Ramsey observed that "Rear Admiral Richardson, my assistant chief of bureau, said the other day that every time he picked up an airplane production schedule he found more airplanes depending on the R-2800-C. I have made the same observation. The 'C' engine is a merit for victory."

horsepower engines. The fly-wheel, weighing five pounds, is spun by an electric motor to a speed of 28,000 revolutions per minute and delivers a punch of more than 1,300 foot-pounds.

How It Works—"In order to build up this fly-wheel speed," Tinkham explained, "the motor first revolves counter clockwise, turning the fly-wheel through gears in a clockwise direction. When an 8,000 rpm. speed is attained, the motor instantaneously reverses its direction while the fly-wheel retains its momentum. The motor, then revolving in a clockwise direction, builds up the speed of the fly-wheel to 28,000 rpm."

The motor is instantaneously reversed by changing the direction of the electric current flowing into it. The fly-wheel of the starter can also be cranked by hand, if battery power fails, or in remote stations where no battery charging facilities are available.

B-29 Engines Built At Big Dodge Plant

Discussions that engines for Boeing's B-29 Superfortresses are being manufactured at Chrysler Corp.'s huge Dodge plant at Chicago has been permitted by the AAF Materiel Command, the first time the government has permitted the world's largest plant to be officially associated with the B-29 program.

23,000 Employees—Large numbers of 2,300 hp. Wright engines are now coming out in increasing volume. Employment has passed the 23,000 mark, or about 60 percent of the 1944 quota, and company officials say it will continue to rise.

Under present production rates, 3,000,000 pounds of aluminum, 1,800,000 pounds of magnesium and 1,000,000 pounds of steel are being used per month.

Conservative ideas, valued at \$332,000 in direct and initial savings, were contributed last year by writers in Canadian aircraft factories, according to the Aircraft Industry Relations Committee, Toronto, which developed an idea pool similar to the suggestion box program in use in the United States industry.

Ideas Save \$332,000

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House Votes Appropriation For 24,230 More Navy Planes

New aircraft provided in 1945 fiscal budget to bring quota to authorized strength of 37,735 "useful" planes.

Appropriations for 24,230 airplanes—of which fewer than 1,000 will be combatants—have been voted by the House as part of the Navy Department appropriations for the fiscal year 1945.

They would bring the Navy quota to the authorized strength of 37,735 "useful" planes. Deliveries would begin in the fall of 1945 and continue through 1949.

Outlay—Appropriations for this construction, if authorized in full by the Senate, will total \$1,643,637,500, with additional contract authorization of \$2,000,000,000. Total naval aviation appropriations would total \$6,300,640,000, of which \$4,605,226,000 would be appropriation and authorization for construction of planes. This is broken down \$1,643,637,500 for new appropriations for the 24,230 planes, plus authorization of the \$2,000,000,000, plus \$1,956,000,000 for liquidation of 1944 contract authorizations.

The rate of obsolescence and attrition is indicated by testimony before the House Naval Affairs Committee that approximately 78,000 planes will have been acquired between July, 1940, and December, 1945, and that the new plane program would be required to bring the "useful" planes with per-

formance required to outmatch the enemy—to the authorized total.

Comparative Prices—Comparative unit prices for various types of planes, including spares and equipment, were revealed during the hearings. The P-51 this year is costing \$135,760, compared with \$170,353 in 1942. The P-47 is costing \$163,460 against \$181,465 in 1942 and \$173,940 in 1943. The SBD dive bomber is costing \$162,450 compared with \$177,615 in 1942. The TBF and TBM torpedo bombers are costing \$260,834 against \$214,804. Average cost of all planes, including spares, this year is estimated at \$175,375. In the new budget this cost is down slightly to \$174,637. In 1943 it was \$194,337.

Training Cost—The most widely used figure on cost of training a pilot has been \$25,000—it is revealed in the budget testimony that the Navy's cost, including operational training is \$31,890.

Summary—Other information disclosed in the testimony before the committee:

• Last class in the CAA training program will be graduated in July.

• Pilot spend a maximum of 18 weeks in training before they go to the fleet.

• Some 26,000 naval aviators will

be produced this year, 21,000 next year.

• There are 118 regular Navy and Marine ambulance planes in operation, "in addition to the large number of Lockheed transport planes fitted for carrying stretchers."

• Resupplying offices are repackaging material for shipment by plane.

• Fifty million dollars is provided in the budget for the construction of aviation drive facilities to care for the additional activity.

• Five hundred thousand dollars has been set up in the budget for an aircraft electrical research building, requested by the Bureau of Aeronautics "which is dangled with the power plant of these airplanes, where the research work has been done at scattered locations; the Naval Aircraft Factory in Philadelphia and various private aeronautical concerns."

• Forty thousand airplanes are now on order.

• Twelve Japanese planes were responsible for loss of supplies valued at \$2,500,000 in one raid at Kwajalein.

B-17 Output Soars

Production of B-17 Flying Fortress at Boeing's Seattle plant has at the rate of nearly one every hour, throughout the two main shifts of each working day during March, when B-17 output amounted to approximately twice the number of transport planes in service on all airlines of the country.



HAFOC GRADUATES TO FIGHTER-BOMBER CLASS

Nine B-17 bomber class, six of them in the line, promote to the fighter-bomber classification Douglas Aircraft's newest A-20 Havoc.

How Many BATHS

DOES A
FLYING FORTRESS GET
BEFORE IT CAN FLY?



100 or 1000? ... We worry about the people who know it's more than most people could guess.

A single sheet of Alkyl may be dipped several times before it is cut or shaped. And from then on every time it is formed, treated, joined or coated, a new cleaning operation is called for. Welding, sanding, plating, painting... all are best done on clean surfaces. Wherever precise fitting or reliable adhesion is to be obtained, the surfaces involved must be clean—physically and chemically clean.

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BRANCHES IN PRINCIPAL CITIES

INDUSTRIAL CHEMICAL PROCESSES AND MATERIALS

Martin Builds New Flying Boat Base

Baltimore facility, to be opened soon, is designed to relieve congestion on present seaplane ramp.

A new flying boat facility, equipped to handle the inspection, packing, testing, operations and servicing of PBMs, Martin and JHM. Many flying boats will be placed in operation shortly at the Glenn L. Martin plant, Baltimore.

It is at Strawberry Point, adjacent to the Martin airport, in which it will be constructed by a concrete trowel. The facility should relieve much of the congestion due to new and increased contracts on the present seaplane ramp in the manufacturing area.

Facilities—Physical facilities of the new base will include a permanent, steel construction daylight hangar, a two-story building to provide office and storage space, a concrete ramp, apron and compass compensating area, and docks for service boats. The hangar will have a 200-foot clear entrance way doors at each end, with space for eight PBM or three JHM flying boats.

Currently, all operations from preliminary ground test to packing and delivery of the PBM-3 Mariner are carried out on the ramp and apron in and around the manufacturing area. Many of these operations will be transferred to Strawberry Point. Under present plans, for utilization of the new base, all operations on

the PBM prior to company flight will be continued at the manufacturing area ramp and apron.

Turned Over to Navy—On completion of company flight, the airplane will be taken to the new ramp, where it will be checked for after-flight check, packed, inspected, inventoried by company and Navy representatives and turned over to the Navy for delivery. The new facilities will be even more fully utilized for the big JHM Mariner flying boats.

The new base was designed by Albert Kahn and Co., and is being built by the Bureau of Yards and Docks of the Navy, with the Glenn L. Martin Co. as prime contractor.

Convair Unit Turns Out 2,000 Liberators

Consolidated Vultee's Fort Worth division observed its second production anniversary with an announcement that more than 2,000 four-engine bombers and transports had been flown from the plant during the past year.

C. W. Peelle, vice-president in charge of manufacturing, and this did not include the thousands of manhours devoted to experimental models of bombers and transports larger than the Liberator series, and the modification of several hundred B-24s for combat operations.

The output included C-47 Liberator Express and two types of the B-24 Liberator. The first Liberator produced by the Fort Worth plant took the air in 1942.

Prop Advances Alter Battle Equipment

Theories regarding the relative merits of electric and hydraulic propellers for dedicated jobs may need overhauling as the result of recent developments, particularly the theory held by many military experts a few years back that electric propellers were good only for pursuits and hydraulics good only on big bombers and transports.

Theory then advanced by many prop experts was that the fighters, or pursuit, would bear the brunt of the battle, while bombers would come in at high altitude and get out, presumably without too much gunfire exposure.

Vulnerability—It was argued that a bullet-pierced hydraulic system would leak, eventually putting the plane out of commission, while the electrically actuated prop could probably keep on operating indefinitely unless a lucky bullet struck a vital point. There also were a lot of worries about hydraulic props freezing up at high altitudes.

Now, with the leak and freeze-up bugs about at least partly overcome, you can find hydraulic and electric props on the same types of fighters, and on larger planes too. It used to be all Curtiss Electric on the P-40, P-38, P-39, P-41, and P-47. But now you'll find the hydraulic Aerograph on the P-39, and the Hamilton Standard hydro-matic on the P-47 and P-51, while the Navy's Corsair and Hellcat fighters also are using Hamilton Standard props.



New Martin Seaplane Base: Artist's conception of the new flying boat facility nearing completion at the Glenn L. Martin plant, Baltimore, showing hangar, seaplane ramp and compass compensating circles as they will look when completed, for use of PBM Mariner and JHM Mariner flying boats.

TRANSPORT

Constellation's Flight Gives Preview of Peacetime Service

Record transcontinental hop gives public idea of how outmoded present aircraft will be by time war is over.

By MERLIN NICKEL

The Constellation's record non-stop flight from Burbank to Washington, streamlined for the public what it may expect when the war is over and the domestic airlines launch their promised era of big ships and high speed.

Future time and experience will have to answer the vital question of operational costs, but a little under seven hours sufficed to show just how outmoded are the planes now operated, though not from choice, by the airlines.

Record Flight—The 40-twin land ship, built by Lockheed and flown by Transcontinental and Western Air, was over the Washington National Airport control tower 5 hours, 37 minutes and 51 seconds after its wheels left the runway on the West Coast.

Chances are that the record swiftness with which the \$3-passenger airliner traveled across the continent sent designers at the major commercial planes desired for post-war use back to their drawing boards to see where they could coax a little more speed potential.

Douglas Abolished—Among them have been Douglas engineers, whose DC-4 has been lashed on with favor by a group of the airlines in an agreement in con-

nection with post-war equipment.

Heralded since last October, the Constellation's non-sanctioned record attempt finally was made without public notice of its importance. Although the hurried departure at Burbank prevented compliance with the full routine required for a full-dress record attempt, Larry Thorburn, veteran air race timer for the National Aeronautic Association, was called from sleep to flag the take-off. The ship was in the air at 3:54 p. m., Pacific War Time. In Washington, three NAA timekeepers stopped their chronometers as the ship swung over the control tower.

Headline—The speed record established for the approximately 2,600 miles traveled remains unofficial, however, largely at the Army's behest. Previous cross-country record was 7 hours and 28 minutes, the time required for a specially designed plane to fly from Burbank to Newark, N. J. Speed then averaged 323 mph. The Constellation's speed averaged about 346 mph. In 1939, in the fastest transport crossing reported previously, a twin-engine Vultee flew from Los Angeles to Washington in 10 hours and 32 minutes,



Co-Captains—Howard Hughes (left) and Jack Frye, co-captains on the Constellation's coast-to-coast flight. Frye is president of Transcontinental & Western Air and Hughes is president of Hughes Tool Co., which has a controlling interest in TWA.

averaging slightly over 321 mph.

Army officials were on hand when the Constellation landed to caution those who made the trip to say nothing about performance. It was disclosed, however, that the official part of the flight after takeoff was at 18,000 feet. Then the ship was sent up to 33,000, and altitude varied from then on between that and 17,500 feet. A rapid descent was started east of Cincinnati, but headwinds were encountered and the rate was made more gradual.

TWA Show—Last week's flight was a TWA show all the way. Co-captains were Jack Frye, TWA president, and Howard Hughes, famed speed flyer and president of Hughes Tool Co., which holds the overwhelming interest in TWA. Hughes took the ship into the air, and Frye landed it. In addition to the crew and TWA and Lock-

Speed Tests

Heads of National Aeronautic Association, official U. S. air time keepers, skip the Constellation's speed flight across the country but were probably marooned at the end of each test until after war was over.

During the expected half, plane are being made to handle a change of speed and altitude limits expected soon after the end of hostilities.

heed technicians it carried Sam J. Solomon, chairman of the airlines committee for U. S. air police, of which TWA is a member. Seventeen persons were aboard. Plans have been made that with the "coach seat" arrangements common to today's airlines, the big ship could carry more than 13 passengers. As a war plane, it may be able to carry as many as 100 soldiers and equipment.

The plane contained Army fittings. Later in the week, after flying to the Army and Navy and TWA's control tower, it was to be flown to Wright Field at Dayton, where, like its prototype, it was to be delivered to the Army. TWA was allowed to make the cross-country flight under terms of the agreement by which the Army took over the airline's contract for 46 of these ships when the war started.

Ground Tests—The first Constellation in flight at the Lockheed plant, undergoing ground tests, it was delivered to the Army last summer. Little has been heard about the Army's intentions on continued production of the Constellation model, but it seems not unlikely that the record flight and the summer in which it caught the public fancy may act as a spur.

Frye intimated that TWA would be glad to get its 40 new, or as soon as possible. Engineers hope that some four-engine craft would be made available to the domestic airlines by next year. TWA's president asserted that creating transcontinental service probably would be the most economic type of utilization for the Constellation.

Frye disclosed that TWA is planning a few non-stop schedules on which the big Lockheed would be used. He thinks these planes can leave the East Coast at 5 p. m. and arrive in Los Angeles at midnight Pacific time. East-bound cross-country flights would have faster schedule, due to favorable winds.



Crowd Drawn by TWA's Big Transport—A suggestion of the bulk of the Constellation may be gained by a comparison with the crowd in this broadcast scene. Although there was little advance notice publicly of the plane's arrival, hundreds streamed through the gate in an attempt to get as close as possible. Army guards were on hand to keep back over-eager onlookers.

Parallel Competition Factor in Rate Case

American opposes TWA's application for service in Joplin, Oklahoma City and Tulsa.

The wisdom of parallel competition was seriously questioned by representatives of American Airlines in hearings before a Civil Aeronautics Board examiner reviewing applications by both American and TWA to serve Joplin, Mo., Oklahoma City, and Tulsa, Okla.

TWA has applied for these steps to form an alternate segment of its transcontinental AM 3 between Amarillo and St. Louis. American is currently serving Joplin on its AM 33 under a temporary exemption granted by the CAB last November.

Parallel Competition—Mid-Continent also is serving Joplin by means of an exemption order as a stop on AM 35.

W. L. McCallin, American's witness, stated the effect of TWA's application, if granted, would be to create parallel competition along some 890 miles of American's route.

Charles L. Gille, assistant to TWA's traffic vice-president, presented the case for his line as an application for east-West service in contrast to American's, which he described as north-south.

Through Service—TWA's proposal, he said, would ensure the residents of the three cities affected of one-plane service to both

coasts, which could not be provided by American.

Representatives of the cities involved stressed the need for such through service to both coasts, cited the economic importance of Northeastern Oklahoma.

Caused for Mid-Continent read into the record a statement expressing a fear that, should TWA be granted the route, it might apply for mid-stop service between Kansas City and Tulsa, thus "encroaching the area with local service routes."

Other Lines Represented—Braniff Airways, Continental Airlines and Greyhound Corp. also were represented at the hearings.

Examiner Lawrence J. Kasters has set May 3 as the date for filing briefs.

McCarren Companion Bill Introduced

Representative King (D-Calif.) last week introduced in the House a companion to the McCarren aviation bill. His bill—H. R. 4906—was referred to the Interstate and Foreign Commerce Committee headed by Representative Leo D. Calhoun, whose own aviation bill is introduced in the House Rules Committee.

King is a member of the Merchant Marine and Fisheries Committee of the House.

The companion bills provide for establishment of a single "All American Flag Line" to handle international airline operations. All American transport planes would be permitted participation.



"Constellation" Reels Record-Seamless Trip at Washington: With brakes squealing and engines throttled down, TWA's Lockheed-built Constellation taxis past

hangars at Washington National Airport after a landing that ended a record trip from the West Coast. The ship flew the 2,600 miles in less than seven hours.

ATC Reorganizes Washington Unit Into Separate Army Air Base

Development brings sorely needed facility to national airport, which has grown into one of the country's most important international air terminals.

Reorganization of the Air Transport Command's operation at Washington National Airport into a separate Army Air Base has been effected, and a terminal unit to house base headquarters is under construction.

The unit will consist of a terminal building, hangar, post office and storage building, and 55,000-square-yard concrete apron, all planned in all general designs for the airport's eventual expansion.

Facilities Needed.—The development will bring a needed facility to one of the most important international terminals. The ATC's full-time function at the National Airport handles more business than is generally realized. It is no longer a secret that planes arrive and depart many times a day for all parts of the world, but the frequency of these movements may not be disclosed here.

Erection of the terminal building is looked upon as an answer to one of the ATC's most serious space problems in Washington. The Command's operation at the airport, formerly tied in with another in the same area, has been and is headquartered in an old

hangar, far from the airport terminal building.

Reasons.—For security reasons, use of the terminal would be impractical, moreover, in many instances. This means that the many dignitaries and diplomats en route earned in and out of the capital by ATC have explained and displayed in an out-of-the-way corner of the airport not designed for handling passengers.

Plans now are that Maj. Gen. Harold L. George, commanding general of the ATC, and other high ranking general officers will dedicate the terminal. Col. Frank H. Collins, commanding officer of the base, also will officiate.

Personnel Transferred.—Colonel Collins, who recently returned from the African war theater, has a long military history, both as a reserve and active officer. He went in the Army Air Force as assistant Chief of Staff of the Africa-Middle East Wing of the ATC in May, 1942. He planned and executed takeover of Pan American Airways facilities in Africa, and was liaison officer with the British, French and Belgians on Lense-Lend and native affairs. When the President

Compact Hangars

Air Transport Command hangars such as that being put up at Washington National Airport can be packed so closely that they occupy no more space than the contents of an ordinary freight car.

Carriage by this means would be prohibitive, however, because of their weight. That at the airport weighs 500 tons and was moved to the site on seven flat cars. No single piece, however, is so heavy that two men can not lift it.

The compact shipping method will work well, as the hangars might be moved by air, as has happened in many instances.

visited Liberia, the colonel accompanied him.

Just when the new terminal unit will be completed is not definite. The building itself will be essentially a passenger terminal, with the necessary adjuncts for clearance of international passengers, such as customs, medical inspection, etc. It will be of modified theater of operations construction, conforming in color with general architecture of the airport. Modifications will conform to the desire of Civil Aeronautics Administration and airport officials that the installation harmonize so far as possible with existing structures. Foundation for the building is in and the construction contract has been let.

Hangar Work Speeded.—Work on the hangar has progressed further. Trial work is nearing completion. Big enough to provide working space for half a dozen C-54's at one time, the hangar will be the first of its size and type in this country. Since it is a highly developed portable type, prefabricated in such manner that its parts can be bolted together in sufficiently small space to be carried in cargo planes, it may be surmised that others of the same design have been erected as ATC's largest base.

The terminal building will be 450 feet long by 45 wide, one story high for the most part, though there will be a lounge with observation deck. The floor will be of asphalt tile and concrete. Heating will come from the Airport's central heating system. Exterior will be pressed aluminum board, with

A WASTEFUL BROADSIDE *from your company* CAN CRIMP A NAVY BROADSIDE *Against the Japs*

YOU BET IT CAN. For the ammunition which our fleet fires reaches its destination protected by paper. And the paper you waste in an ornate, unnecessarily large advertising broadside is just what the Navy and the Army need to do their job.

That's why Uncle Sam asks you to watch every company project in terms of USING LESS PAPER. Whether it's a direct mail piece or a letter or a paper-board container—think of it as a challenge to you and to your colleagues. Yes, a challenge to you to see how you can carry on your business and

at the same time cut down and cut down and cut down on your company's use of paper.

Remember the whole country is being enlisted in this drive. You'll be a soldier in a mighty army of paper conservers.

And remember, right now, there's no home-front conservation job any more urgent or important than the conservation of paper and paper board.

If your company or your community has not yet organized Paper Conservation Committees, why not start these yourself and now?

Use Less Paper Because

Each 500-pound bomb takes 12 pounds of paper for maps, type and letters.

A fiber container for a 75-millimeter shell takes 1.4 pounds of paper board.

Each weapon part must be wrapped in grease-proof paper and in waterproof paper. A single shipping case of demounting apparatus requires 275 square feet of waterproof lining paper.

All kinds of paper are used by the Army, from vegetable parchment, 6015 inches thick, to heavy paper board and wallboard.

Use Less Paper These Ways

Use smaller type sizes and margins. (Any competent printer, in consultation, can point the way to recommended savings by these means.)

Reduce superscripts to shoulder height.

Eliminate top and/or bottom pads in every practical instance.

Make scratch pads from stocks of obsolete letterheads, memorandum forms, and other unused inventory.

Cut the weight of paper stocks. (You tell the printer how long you expect a record to endure and he can tell you what stock to order.)

This advertisement prepared under the auspices of the War Advertising Council in cooperation with the Office of War Information and the War Production Board.

LET'S ALL USE LESS PAPER

Spec for this advertisement contributed by AVIATION NEWS



ATC Erecting Hangar at National Airport. Construction units of hangar being built at Washington National Airport by the Air Transport Command as part of a new terminal unit. Twelve of these trusses will be used. The hangar is said to be the first of its type and size erected in continental United States.

board trim. The building will have an inter-communication system. It will be a Red Cross Canteen, a 24-hour cafeteria, and all accommodations for modern airport operations.

50-Foot Clearance—The banger will be 330 by 330 feet, with 50-foot clearance under the center of the arch.

Of bowstring arch construction, it will have lean-to compartments on each side, with space for storage, machine shops and similar purposes.

AA Re-Elects Board

Stockholders of American Airlines, meeting last week in Washington, Del., re-elected all members of the present Board of Directors.

Officials continued in their present positions include: A. N. C. Charles A. Riekenstein, D. M. Moser, Ralph S. Dennis, Thomas S. Harman, Walter S. McLaughlin, Edgar M. Querry, H. E. Benedict, Arnes G. Carter, William R. Evans, James Bruce, Harold Ames, Edward H. Butler, John W. Parley and Chandler Hawley.



Commanding Officer Col. Frank H. Collins, commanding officer of the Air Transport Command's new Washington National Airport Army Air Base, was among the first reserve officers called to extended active duty in 1940. The ribbon on his chest attests his long military career. Next month marks his second anniversary in the Armed Air Force.

AAA Headed for Athens, Ohio, Stop

Line points to almost increase of 325 percent in application.

All American Aviation should be certified to serve Athens, Ohio, as an intermediate point between Pomeroy, Ohio, and Parkersburg, W. Va., on AM 40, CAB Examiner Albert F. Berel said last week at the close of a hearing on that line's application.

The examiner's recommendation was based on a letter from the Post Office Department to CAB Chairman L. Welch Pogue, which said current mail counts at Athens show that airmail service should be provided.

Up 325 Percent—Harry R. Stinger, vice president of All American, said that his line had experienced a 325 percent increase in airmail business. This increase occurred the years 1941-1942 and was in contrast with a general increase in airmail over the United States of only 75 percent.

Stinger and the proposed stop would improve airmail service to Pittsburgh, Washington, and New York by at least one day.

Applied for in 1941—All American had applied for the additional point in 1941, but the request was refused by the Civil Aeronautics Board then on the grounds that potential business did not warrant it.

ATA Head Reports 40% Traffic Gain

First quarter gains in all lines of air transportation were registered by the domestic airlines, reports Col. Eugene S. Gervell, Air Transport Association president.

Compared with the 1943 period, revenue passenger miles were up 40 percent, mail parcel-miles 50 percent, and express parcel-miles 43 percent. Mail and express parcels also increased.

Revenue passenger-miles rose from 232,573,750 in the first quarter of 1943 to 463,899,890 in the first three months of 1944, and parcel-miles from 15,087,722,087 to 23,506,066,066, mail parcels from 22,619,863 to 34,694,094, express parcel-miles from 6,098,054, 382 to 9,500,000,000, and express parcels from 12,842,471 to 18,393,000.

Formulation of Surplus Plane Distribution Policy Believed Near

Pogue speech at Las Vegas interpreted, along with other factors, as indicating early U.S. action to relieve off-loading of mail and passengers as war measure.

By WILLIAM G. KEY

The air transport industry will be among the first to submit suggestions for surplus plane distribution to the Surplus Aircraft Advisory Subcommittee set up by the Surplus Property Board.

That same action is in the offing that would dictate establishment of a policy in the near future is indicated by a number of factors, not necessarily linked but, taken as a whole, pointing in that direction.

Issue of 100 Planes Asked—L. Welch Pogue, chairman of the Civil Aeronautics Board, in a speech at the Aviacon celebration in Las Vegas, Nev., publicly urged for the first time that 100 planes be returned to the airlines. He later told AVIATION NEWS that "we've been after the Army a long time to do this as a war measure to help off-loading of millions of pieces of mail and thousands of passengers. The release of planes will bring about a speed-up in the economy of the war effort that is new increasingly vital."

However, any planes now released to the airlines will be planes that were sold outright, rather than loaned, to the Army, or planes from surplus stocks of the services. Only one or possibly two in the lease category remain, and any further returns or releases under present circumstances will mean capital expenditures for the airlines at a time when such expenditures could be ill-afforded. The larger airlines probably could absorb a purchase of these planes, but many would be forced to purchase them at the expense of a readjustment after the war. This would be particularly true if the war were to end suddenly after such purchases had been made.

Machinery Needed—Many of the planes bought by the Army from airlines cannot now be returned. Some have been destroyed, some are in other countries, some are no longer suitable or safe for reconversion.

The machinery for release of additional planes has already

been started, and is expected to go into gear as soon as the European invasion is started and Army requirements can be more slowly determined. That appears to be the principal reason for withholding additional planes today. The procedure required to lift the presidential restriction of 300 planes for airline service has been started, and unless it is moving nearly as some Pentagon people believe, the request for removal of the limit may have gone to the White House.

Most This Week—Airline executives are expected to discuss their views with the Surplus Property Board subcommittee this week or next week. Members of the subcommittee are L. Welch Pogue, chairman of the Civil Aeronautics Board and aviation representative on the SPB, chairman, Nicholas

W. Morgan, chief of the Aviation Division of the State Department, Col. E. Truitt Dawson, Rear Admiral Lawrence B. Richardson, Assistant Secretary of Commerce William A. M. Darden, Walter E. Jaxon, and Paul T. Davis.

That subcommittee will report to Surplus Property Administrator Will Clayton and to the full Surplus Property Board.

At a Board Meeting—A meeting of the board of directors of the Air Transport Association has been called for Monday, April 24, in Washington to discuss the surplus plane program, and representatives of the ATA will appear before the Surplus subcommittee to present the views of the association. Heads of all airlines, it is understood, have been notified of the meeting of the ATA directors and have been asked to attend to present their views to the board.

The Surplus subcommittee, it is believed, will attempt to strike a balance between speedily and economically sound liquidation of the surplus transports and protection of the taxpayer's investment in these planes. On the other hand, the body will have to strike another balance between this investment and maintenance of a sound aircraft manufacturing industry and a strong air transport organization.

A Seat for the Mighty!
(B-29)

Here is just one of the many ways we are growing the size of our B-29 Superfortresses. We are growing the size of our B-29 Superfortresses. We are growing the size of our B-29 Superfortresses. We are growing the size of our B-29 Superfortresses.

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for the production of components for the B-29 Superfortress. In addition to the B-29 we are also building B-29 Superfortresses. We are growing the size of our B-29 Superfortresses. We are growing the size of our B-29 Superfortresses.



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TRINIDAD PLANS ONE-RUNWAY AIRPORT:

Only one runway may be required for a new \$7,000,000 airport planned for Port-of-Spain, Trinidad. Pre-war trend study indicates that a single, east-west runway will permit landings with a crosswind of no more than 18 degrees. Plans by the Trinidad Housing and Planning Commission, whose sketch is shown above, call for a runway 8,000 feet long and 250 wide, with enough taxi-ways to accommodate single landing taxiway length. The planners are anticipating post-war aircraft up to 150 tons. Mark problems is said to be the soil aspect, where 600-foot hills stand three-quarters of a mile from the end of the runway. A sea-plane base to handle craft larger than the Martin Mars will adjoin the landing base.

RCAF Releases Data On Transport Unit

Service operates from Canadian Pacific coast to Cairo

Details of the Royal Canadian Air Force Transport Service have been revealed at Ottawa with the announcement that the service operates from the Canadian Pacific coast to Cairo. It covers routes extending from Whitehorse, Yukon, and the Queen Charlotte Islands on the Pacific coast to all parts of Canada. Regular routes are run from Ottawa to Halifax, from Montreal, N. B., to Gander, Newfoundland, from Montreal to Goose Bay, Labrador.

The service is considered a training ground for future Trans-Canada Air Lines crews. Recently H. J. Symington, president, and at Ottawa that the RCAF had been asked to supply 15 pilots and 100 aircrewmen for commercial routes. It is generally assumed that the RCAF Transport Service will handle the operations in the interim until **Qualifications**—The service is made up of men who have served at least one complete tour of overseas operations over Germany. With the exception of pilots, the aircrew for the Transport Service are given an special training except a few shakedown cruises. Pilots are given a transport training course at Montreal.

The RCAF Transport Service is

Ground Crew Jobs

A. N. Kemp, president of American Airlines, budget of the domestic operations in a Boston conference that he and Air Transport Command pilots would have "wonderful experience" to offer the airlines, but predicted the demand will be far greater crews. He expressed doubt that fighter pilots, accustomed to speed and danger in the air, would be easily adapted to the strict safety procedures of commercial air transport. American, he said, is employing service men discharged from the military and giving careful study to possibilities of further employment in greater numbers. He estimated that the air transport industry will be able to absorb about 250,000 ex-service men in the next four or five years.

under the command of 37-year-old Group Capt. E. Lewis Leigh, Leitherton, Alta. In charge of passenger transport is Wing Commander Marlowe Kennedy, 39, of Winnipeg. Mail and cargo transportation are under Wing Commander Bruce Middleton, 33, of Port Franks, Ont., and ferrying 50 air station ferry service is under Squadron Leader Ernest Hall, 43, of Cumberland, B.C. The mail transport division dispatches mail to Canadian cities serving the various theaters of war.

UAL Head Resigns From ATA Board

Patterson, director since 1936, points out that company is not withdrawing from association

W. A. Patterson, president of United Air Lines, has resigned as member of the board of the Air Transport Association and withdrawn from ATA's finance committee. He said, however, that the action, effective immediately, does not preclude reinstatement of United from the Association.

"United, as a company, is not resigning," Patterson asserted. "I will continue to work in all cooperative work. But I don't feel that I can contribute a great deal as director." He has been a director since the association was organized in 1936.

ATA Board Meets—The airline executive and United's differences with the other domestic airlines on the "closed instrument" question or debate on the association's financial policies had nothing to do with his decision.

"There seems to be a difficulty in getting people together," he observed, "and I don't like to go to meetings and feel I'm sitting alone."

ATA's board of directors is to meet Monday, Apr. 24, but Patterson said he would not attend. Undoubtedly his resignation will be up for discussion.

Offered as Foreign Policy—Classified is the only one of the domestic airlines that has favored a single American flagship airline in post-war international aviation. Others favor regulated competition by all the airlines.

In denying that this circumstance was the reason for his withdrawal, Patterson explained that the difference was not an association issue.

SHORTLINES

Pan American Airways announces schedules by its flight crews of 6,000 transoceanic crossings since Pearl Harbor, including constant service and special assistance for Air Transport Command and the Naval Air Transport Service and regularly scheduled operations.

Governor Dewey of New York has signed the bill which authorizes the city of New York to finance the new Idlewild Airport project, estimated to cost \$100,000,000.

A place retained by the Army Air Forces to Pennsylvania-Central Airlines has enabled that company to schedule a daily non-stop round trip between Washington and Cleveland and to add four new daily round trips between Washington and Norfolk, making a total of eight per day on the latter route.

Pan American is flying six weekly round trips to Miami via Miami, Nassau, Bahamas, B. W. I. A new daily round trip flight by DC-3 between Miami and Mexico, Mexico, and San Antonio, Texas, and Cleveland. The first week-includes in PAA history serve on these flights.

An Airlines Terminal Building in downtown Chicago is planned by eight airlines serving that city: United, TWA, American, Eastern, Pennsylvania-Central, Chicago & Southern, Braniff and Northwest are all interested in the project, as is Pan American, which maintains a district office in Chicago.

Two daily round trips have been added to Continental over its new St. Paul-San Antonio route.

A CAA contract for construction of a \$1,354,900 airport at the University of Illinois has been authorized, but the Army is still reviewing the military necessity of the project and in order to proceed has not been issued.

The sales of a \$708 light plane which could be built by high school boys is being considered by Civil Aeronautics Administration engineers, but no design has yet been worked out.

Harrogate Flying Service has announced operations at Municipal Airport, Norfolk, Maine, N. C. The service, to be offered as soon as complete equipment and personnel are available, include student instruction, charter flights, plane sales, storage, and service.

Two daily round trips between St. Paul and San Antonio via Midland-Texas, via Flying Service and Braniff have been started by Continental Airlines.

Top Men in RCAF Air Transport Command: Top officers of the Royal Canadian Air Force Air Transport Command are shown here with Canadian Air Minister C. G. Power (center). At right is Group Capt. S. L. Leigh, director of the RCAF Air Transport Command, and left is Wing Commander B. B. Middleton, assistant director and head of the transport wing of the service. Mail for overseas may be seen in the nose of the plane.

ation. While airlines generally have that some reserve necessary for purchase of additional aircraft, the use of this reserve in purchase of surplus war transports might operate against their ability to order new planes, particularly if the war were to end before the additional investment could be liquidated.

Tax Burden—Present tax laws make it almost impossible for many of the airlines to build capital reserves sufficient to buy planes that are obsolete and to order the new commercial models without impairing their financial structure.

Lease Agreement Sought—There is general agreement in the transport industry as the wisdom of some form of lease agreement permitting use of the surplus transports by domestic and foreign airlines during the transition period. This would yield some return from the nation's investment in the planes and at the same time permit their use by the airlines on an economically feasible basis.

Aircraft manufacturers also are generally agreed on the leasing principle, and is the time of foreign operators believe that down payments and balances built up through apportioning part of the lease funds to purchase of new equipment are necessary. It is pointed out that while new designs will bring refinement of domestic transports from domestic operation through increased efficiency, many foreign operators will not have

that factor keep the picture because of lower operational standards. Right now, for example, the use of the DC-3 payload, for example, by overloading of 15 percent.


Port Development Body of ATA Meets

The Airport Development Committee of the Air Transport Association held its first and organizational meeting in Chicago with a representative of ten airlines.

The committee will make a study of airbase needs in airport facilities, both new and after the war, to be presented to the Civil Aeronautics Administration when it has been coordinated.

Officers—Chairman of the group, which plans to receive preliminary reports from subcommittees at its next meeting May 15 at New York, is Charles French, chief engineer for Eastern Air Lines. James Groves of ATA is committee secretary. The group was established by ATA's board last December.

A subcommittee on terminal buildings and facilities is headed by Ralph M. Chamberlain of Pennsylvania-Central Airlines. Richard B. Huber of TWA is chairman of a group studying location and types of ports and runway layouts. Earl K. Harvey of American Express is chairman of a subcommittee working on construction details, such as drainage, lighting and runway construction.




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The Cradle of Aviation



Aircraft Company Earnings Lag Far Behind Business Increase

Incomes uniformly good, with amount of profiteering negligible, examination of corporation records reveals.

By ROGER WILCO

With reports of the major aircraft companies now a matter of record, the observation may be made that, while earnings have been uniformly good, there is a noticeable lack of profiteering in the industry.

United Aircraft Corp., for example, despite an increase of 56 percent in sales, earned less net income for its stockholders in 1943 than it did in 1942. Net income in 1943 was \$15,395,611, or \$9.48 a share. This compared with \$17,090,543 or \$9.86 per share for 1942.

No Excessive Profits.—Significantly, the company noted that it has been advised by the chairman of the Navy Board "that no excessive profits were realized in 1943, subject to final approval." In other words, subject to formal approval, United is the only major aircraft company to be out of the renegotiation program for 1943 and its earnings can be accepted with a certain degree of finality.

Further, United at the outset of the war announced its intention of confining its profits to levels prevailing immediately prior to the war period. How well the company has adhered to this policy is indicated by previous earnings. Net income, or common share, rose from \$5.53 in 1939 to \$8.81 for 1940 and reached a peak of \$6.39 for 1941.

Financial Structure Strengthened.—Throughout the years, however, United Aircraft, along with the industry as a whole, has steadily strengthened its financial structure. For instance, total property accounts of all descriptions—land, buildings, machinery and equipment—having an original indicated valuation of \$37,615,097 were depreciated and carried on Dec-31, 1943 at \$9,168,595 as of Dec-31, 1943. A substantial percentage

of these facilities was acquired in the performance of early French and British contracts. The high rate of amortization permitted under U. S. contracts also was responsible for the material reduction in the book figure for the property accounts.

It is clear that inflated property appraisals are absent from most aircraft balance sheets. If anything, this asset may be found to be a liability inasmuch as a source of hidden value in many aircraft structures.

Bell Sales Double: Profit 60%.—Some interesting anomalies are present in the financial results reported for Bell Aircraft Corp. The company showed gross sales of \$235,134,000 for 1943 compared with \$110,771,000 for 1942. While sales were more than doubled, operating profits were actually down by almost \$1,668,658. It was solely because of smaller tax payments that net income was up. Profit before taxes in 1943 was \$1,131,200 as against \$1,633,200 for the prior year. This decline can be attributed to the fact that most of Bell's billings were of the cost-plus-fixed-fee variety and upon which profit margins are lower than on fixed-price contracts. Another way of viewing the Bell results is that it took \$406 of added sales last year to earn \$1 more after taxes.

The Bell statement further emphasizes the importance of renegotiation proceedings in accepting earnings reports. The company's stock price was first reported at \$203.553 or \$17.74 per share on 350,756 shares of stock. These earnings have now been restored and reduced to \$2,911,543 or about \$6.16 per share.

Final Settlements.—Bell believes that adjustment will mean the re-

negotiation authorities but no final settlement has yet been made. Net earnings for 1943 were \$3,652,000 or \$7.17 per share. Here again, while the company says it does not believe refunds will be necessary, no formal approval has yet been acknowledged by the government.

Givon L. Martin Co. is one of the low aircraft builders to report a doubling in sales volume with an almost commensurate increase in net income. Net sales for 1943 reached \$132,151,970. Net income for that period totaled \$13,017,563 or \$11.18 per share on 1,118,214 shares outstanding. This was after a \$7,000,000 provision for a contingency reserve which can be continued as additional earnings of more than \$6 per share. Earnings for 1942 totaled \$6,558,839 or \$6.01 per share and after a contingency reserve of \$2,939,930.

Belmont Made.—The price adjustment is based upon reports as having received the company's operations for 1942 and finding that "no excessive profits were earned during that year." Martin added that it made an \$1,103,146 claim for 1943 and no provision has been made for any reduction in contract prices for that year.

Gradually accumulating are the various contingency reserves of the various aircraft companies. These reserves, differing in total, have the common design to ease the industry out of the expense and difficult transition stage in the post-war era. These contingency reserves for the major aircraft companies, as revealed by their 1943 annual reports, follow:

Bell	\$ 3,000,000
Consolidated-Vultee	\$13,506,000
Deagles	\$11,212,896
Martin	\$11,212,896
United Aircraft	\$10,203,787

These reserves undoubtedly will be greatly augmented during the current year. The fact remains, nevertheless, that the industry will have most of all the financial strength it can muster to face the uncertainties of the future.

Financial Reports

Chicago and Southern Air Lines.—Reports net profit after income taxes of \$2,325,953, decrease in net profit from \$2,146,000 in 1942 to \$1,600,000 in 1943, resulting from a reduction in mail revenue and a 35 percent increase in operating costs. Total operating revenue for 1943 was \$3,774,941, compared with similar revenue for 1942 of \$2,906,638.

Noorduyn '43 Report Reflects Tax Strain

Canadian firm's earnings shrink under new levies, just as in U. S. Buyer points out.

Aircraft manufacturers in Canada show many of the same problems causing concern to the industry in the United States as evidenced by the report of Noorduyn Aircraft, Ltd., in which W. L. Buyer, president, said "the present system of taxation allows no award for innovation."

Directors of the company "expressed the hope that the government's ultimate policy as regard to the aircraft industry and its future will mitigate this situation considerably." The report and it was impossible for the company to improve its financial condition to appreciable extent, and thereby "in some measure insure the immediate post-war position, from points commensurate with such policies in production and efficiency."

Income Declines.—Noorduyn's net earnings for 1943, without the refundable portion of the Excise Profits Tax, show a decline to \$38,119 or 21 cents a share from \$12,324 or 41 cents a share the preceding year. Including the refundable portion, the amounts are \$162,174 or \$1.32 per share for 1943, compared with \$162,234 or \$1.48 for 1942.

Provision for income and excess profits taxes totaled \$693,000, including the refundable portion of \$122,000, as compared with \$587,000, including the refundable portion of \$64,000 last year. Working capital at the end of 1943 amounted to \$1,244,618 as against \$93,994 the year before.

Production Value Up.—Value of production of completed aircraft and spare parts, at cost, is given at \$33,718,872 for the year, against \$27,194,596 in 1942. Net sales on fully completed contracts are carried into the profit and loss statement, as final prices are not determined by the government until after a contract is completed. A rebate of \$1,086,333.35 is set up to provide for possible adjustment of prices.

Number of employees at the end of the year was 11,616, an increase of 32 percent over the previous year. The payroll for December, 1943, was \$1,763,738.52, an increase of 46 percent over the same

month in the preceding period.

Yvesair Output Up.—This report said production of both the Westwind AT-16 advanced trainer, under license from North American Aviation, and of the Noorduyn Norovis C-54 transport of the company's own design, continued at an accelerated rate during the year. Total aircraft produced in 1943 was 1,228, an increase of more than 166 percent over 1942 and of more than 600 percent above 1941.

Production of the Harvard has now been shifted at approximately the peak rate reached and present indications are that this type of output will be repeated until well into 1945. Output of the Norovis, however, after currently running in excess of contract schedules, has not yet reached its peak and no statement in the requirements for this type is in sight.

National Declares Stock Dividend

A stock dividend of 1/3 share of common for each share outstanding has been declared by National Airlines, G. T. Baker, president, announced after a board meeting last week. It will be payable April 26 to stock of record April 26.

George W. Gibbs, Jr., treasurer and general manager of Gibbs Gas Engine Co. of Jacksonville, and vice-president and director of the Gulf Atlantic Transportation Co. was elected a director. Other directors are Paul Peyrier of St. Petersburg, E. P. Telford and Col. Jerome A. Wasserman of Tampa, Paul Scott of Miami and William K. Jacobs, Jr., of New York City.

Liberty Reacquires Stock from Grumman

Liberty Aircraft Products Corp., of Farmingdale, Long Island, has reacquired from Grumman the 56,960 shares of its own common stock that Grumman purchased in 1940. The transaction will not affect the business relationship of the two firms. Most of the Liberty's work now is for Grumman and a great deal of Grumman's machine work is done at the Liberty plant.

The 56,960 shares will be held in Liberty's treasury. This leaves 13,533 shares held by 1,160 per-

sons, including directors and officers and members of their families. Price of the shares was not disclosed, but it was rumored that Grumman received \$14 a share for the stock for which the company paid about \$8 in 1939.

Aero Supply Mfg. Co. Salaries Reported

Frank N. Ames, president and director of Aero Supply Mfg. Co., Inc., received \$35,000 for 1943, the company's annual report to the Securities and Exchange Commission shows.

Sam J. Irvine, vice-president and director, received \$24,000, and Louis E. Grahman, vice-president, secretary and treasurer, and director, \$23,800 for the same period.

Cannell Gets \$26,500.—President Theodore Cannell of Cannell, Kauter & Donnelly received \$26,500 as general counsel.

The nine directors were paid a total of \$182,580, the report shows. Statement showed net sales of \$19,841,040 and net income before provision for income and excess profits taxes of \$5,455,688. Net income after providing for these obligations and setting aside \$1,040,000 for reorganization fund and \$77,050 as a reserve for contingencies, was \$320,790.

Stock Ownership.—Ireneia S. Shuck is reported as owning beneficially 96,939 shares of the company's Class "B" stock, 41,500 shares of which are registered in the name of Miss Ireneia, Jones & Co. Thus, she owns 11.91 percent of the outstanding Class "B" stock and the remainder of the Class "B" stock is owned by 11,911 persons outstanding Class "A" and Class "B" stock shares.

Dallas Exposition To Be Annual Event

Sponsors of the Southwest Aircraft Exposition, to be held in Dallas, Apr. 25-26, already are making plans for developing the sessions into an annual international aviation exposition.

International Day.—Efficiency and representation of the Latin-American republics have been invited to attend on International Day, Apr. 29.

Leading manufacturers will contribute to the industry exhibit, including Army and Navy planes and captured enemy aircraft.

Industry Efficiency

THE LATEST naval appropriations hearings on Capitol Hill furnish convincing new evidence of the rising rate of efficiency of the aircraft industry, despite its unprecedented problems, and the contrasting inefficiency of the government's own pioneer plane plant.

Construction and maintenance of a so-called "yardstick" plant to act as a check on the industry's cost figures was a perennial subject in Congress. Adherents finally passed legislation setting up the Naval Aircraft factory at Philadelphia.

Testimony before the House Appropriations Committee discloses not only a substantial reduction year after year in unit aircraft cost accomplished by naval aviation contractors, but a continuing higher cost for planes built by the government plant.

Increased efficiency by the industry is shown in the drop in the average cost of \$194,537 for a Navy plane in the year ended June 30, 1943, against this year's average of \$179,373. A further reduction to \$174,617 is anticipated in the next fiscal year. These reductions represent a major accomplishment by the manufacturers, considering the trend toward heavier, larger naval planes, and the manufacturers' rising operating and production expenses.

Individual examples of unit price economies in a two-year period include reduction of the Grumman Hellcat from \$179,343 to \$133,368. The Vought Corsair two years ago was averaging \$194,485 per ship. It is now \$263,400. The Curtiss Helldiver in full production costs \$162,870 instead of \$171,413.

while the Grumman Avenger cost has declined from \$314,664 to \$168,534.

Naval officials, however, conceded in testimony that production of a Catalina now costs \$56,000 more at the Navy's factory than the same type being turned out by Consolidated Vultee at San Diego.

The "yardstick" plant's price at \$297,856, or 17 percent more than the Corsair cost of \$247,183. Thus, if all Catalinas built last year had been turned out by the government plant, U. S. taxpayers would have footed an additional \$28,000,000 on this one model alone. The Catalina, of course, represents an insignificant proportion of the dollar volume of aircraft production during the past year.

It is true that the naval plant probably produced fewer than 50 Catalinas, or perhaps one-tenth the number delivered by Corsair. The small output would tend to keep production costs higher. But reliable sources also disclose that the factory ranked among the lowest in pounds of airframe weight per employee, one of the fastest indices of output in the industry. The plant also failed by more than 50 percent to meet its Catalina schedule. A study of the factory's experience in other years with previous models shows a steady failure even to meet the standard it was intended to exceed.

These facts reflect criticism on neither the Navy Department nor the officers directing the plant. Rather, they indicate once more the inherent fallacy in the theory that government can conduct industry with efficiency and economy.

Constellation Sets Pace

THE TRANSCONTINENTAL non-stop flight of the Constellation at an average coast-to-coast speed never previously approached by a single transport was the outstanding event of the year in commercial air transportation. The ease of the accomplishment was a dramatic and potent reminder to the public that the airlines of the United States are preparing the world's finest air service, far more, after the war.

Developed by Howard Hughes, Jack Frye, and other TWA executives, and built by the pioneer

manufacturer of the world's fastest commercial transports, the Constellation is an outstanding product of American competition. Every attempt has been made to improve four-engine transport performance, speed, comfort and economy characteristics. The result of the Constellation's tests will be not only to raise the standards of competing aircraft, but to bring other, newer transports into being. The air transport industry and the traveling public of the future will owe much to the Constellation's makers.

Reese H. Woot

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For the Aviation Industry, Grand Rapids Industries offers its facilities for the prompt production of whatever can be built of wood — solid or laminated. At your service is research, engineering, and the coordinated capacity of 15 plants, with hundreds of skilled woodworkers who are experienced in production in volume for the exacting specifications of aircraft — from precision parts to complete wings and other assemblies.

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** A Sikorsky XR-4 hovering motionless over East Hartford, Connecticut. This first helicopter to be delivered to the Army Air Forces is equipped with six Timken Bearings in the Main Rotor Blade, two in the Tail Rotor Gear Box, and six in the wheels.*

To meet the need of aircraft engineers for an anti-friction bearing—lighter in weight—of compact design—with maximum radial and thrust load carrying capacity—Timken engineers have developed a new series of tapered roller bearings.

Already, these bearings have contributed to the fine performance of Sikorsky helicopters... while giving them all the other advantages of Timken Bearing design for aircraft applications: assured smoothness of operation... ease of handling... power conservation and endurance... economical maintenance.

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